ANNUAL REPORT

of the

DEPARTMENT *of* SURGERY

1950

THE NEW YORK HOSPITAL-CORNELL MEDICAL CENTER
525 EAST 68TH STREET, NEW YORK 21, N. Y.

ANNUAL REPORT

of the

DEPARTMENT *of* SURGERY

1950

The New York Hospital-Cornell Medical Center
525 East 68th Street, New York 21, N. Y.

Digitized by the Internet Archive
in 2015

https://archive.org/details/reportofsurgical1950newy

ANNUAL REPORT

of the

DEPARTMENT OF SURGERY

The New York Hospital - Cornell Medical Center

1950

by

FRANK GLENN, M.D.

To the President of the Board of Governors of The Society of the New York Hospital and the President of the Board of Trustees of Cornell University:

It is with sorrow that we must record in this year's report the death on December 15, 1950 of Dr. George J. Heuer, Emeritus Professor of Surgery. His great contributions to the advancement of surgery, and to this department in particular which he organized and developed, cannot be enumerated here with justice. As Surgeon-in-Chief to The New York Hospital and Lewis Atterbury Stimson Professor of Surgery of Cornell University Medical College from 1932 to 1947, he placed his greatest emphasis on the training of young surgeons through the resident system which he inaugurated at The New York Hospital. His accomplishments as a surgeon, a teacher and an investigator did much to make this period in the history of the center one of great achievement. His ideals and objectives will continue to be upheld by those who grew to professional maturity under his guidance. His plans for further surgical studies after his retirement were unfortunately curtailed because of his illness in 1947. We hope this disappointment was in part modified by the continued admiration, appreciation and love of the younger men who worked under him, many of whom are now located throughout the country. To them he devoted his life as a great teacher of surgery.

The 1950 figures for the Department of Surgery reveal that we have again surpassed previous years in the number of patients cared for and the number of operations performed. Analysis of the statistics also shows a slight decrease in our mortality rate and in our morbidity of complications. These facts are but part of the evidence that we have been able to extend the service rendered to our patients with almost no structural changes in our facilities. This service has been made possible by the liberal support of the governing bodies of this medical center and by the unstinted devotion, serious application, and wholehearted cooperation of all the personnel, not only of our own department but all sections of the institution.

TEACHING

The teaching program for both graduate and undergraduate has been extended and intensified. For the resident staff this has meant inclusion of additional opportunities for clinical work and investigation. For the undergraduate students it has signified more personal type of instruction and more firsthand experience.

The graduate group consists of a resident staff of 60 which works under the guidance of the senior staff. Included are general surgery, the six surgical specialties, anesthesia and surgical pathology. The residents have contributed greatly to the accomplishments of the department. One of the main features of the resident system of graduate teaching is the step-by-step advancement of the trainee to increased responsibility under close supervision. This permits the highest type of patient care and makes the most of the young surgeon's time. The wide facilities and material available at a large medical center give the student with unusual capacity ample means to supplement his surgical training with conferences and instruction in the basic sciences such as anatomy, physiology and chemistry.

The undergraduate group in surgery includes the second, third, and fourth year medical students, totalling about 240. In the latter part of the second year a series of lectures and exercises is given on the fundamental principles and basic procedures of surgery which are essential to the work to follow in the third and fourth years.

The change made a year ago to provide clinical training in surgery during the third year in the Out-Patient Department, followed by pavilion clerkships in the fourth year, has proved very satisfactory. Our evaluation of the present fourth year class, the first group to benefit from the change, leads us to feel that the preliminary introduction to surgical problems encountered in the clinics in his third year gives the fourth year student a better approach to the more advanced surgical problems encountered in the patients requiring hospitalization. By dividing the class into small groups, closer association between the undergraduates and the senior and resident staffs is achieved and greater opportunity afforded for more individual instruction.

SENIOR STAFF

The senior staff of the Department remained virtually unchanged during the year. The Surgeon-in-Chief and his immediate associates, Dr. C. G. Child and Dr. S. W. Moore, were assisted in the administration of the Department by Dr. William A. Barnes, Dr. William F. Nickel, and Dr. Ward D. O'Sullivan. The attending surgeons in charge of the specialties remained as follows:

Dr. Bronson S. Ray	*Neurosurgery*
Dr. John M. McLean	*Ophthalmology*
Dr. Frederick L. Liebolt	*Orthopedics*
Dr. James A. Moore	*Otolaryngology*
Dr. Herbert Conway	*Plastic Surgery*
Dr. Victor F. Marshall	*Urology*

The senior staff totals approximately 130 and the resident staff 60.

At the completion of his residency on December 31, 1949, Dr. Ward D. O'Sullivan became an Assistant Attending Surgeon and Instructor in the medical college, devoting a fair portion of his time to investigative work in liver disease and cardiovascular surgery. Dr. Vincent Gorman completed his residency on June 30, 1950 and immediately began surgical practice in Bridgeport, Connecticut. Dr. Earl A. O'Neill, who completed his training at the same time, was appointed Assistant Attending Surgeon, and Instructor in the medical school. He has entered practice in Plainfield, New Jersey, and is carrying on investigative work in the Laboratories for Surgical Research here.

Under the direction of Dr. William D. Andrus, the Cornell surgical service at Bellevue Hospital embarked on several new studies in wound healing, surgery of the heart and large blood vessels, and intrathoracic disease. Assisting Dr. Andrus in these projects, in addition to the regular staff of the Bellevue service, have been Dr. Cranston Holman, Dr. John Eckel, Dr. James Dingwall, and Dr. Cooper Person, of The New York Hospital staff.

RESIDENT STAFF APPOINTMENTS FOR 1950

General Surgery

Resident Surgeons

Vincent A. Gorman	July 1, 1949 to June 30, 1950
Earl A. O'Neill	July 1, 1949 to June 30, 1950
Francis C. Jackson	Jan. 1, 1950 to Dec. 31, 1950
James E. Davis	July 1, 1950 to June 30, 1951
David S. Speer	July 1, 1950 to June 30, 1951

First Assistant Resident Surgeons

James E. Davis	July 1, 1949 to June 30, 1950
David S. Speer	July 1, 1949 to June 30, 1950
George R. Holswade	Jan. 1, 1950 to Dec. 31, 1950
Arthur L. Gore	July 1, 1950 to June 30, 1951
Ross S. McElwee	July 1, 1950 to June 30, 1951

Assistant Resident Surgeons

Henry C. Cleveland	July 1, 1948 to June 30, 1950
Richard C. Karl	July 1, 1948—
Roy D. McClure	July 1, 1948—
*Paul W. Braunstein	Jan. 1, 1949 to Oct. 31, 1950
*Peter Dineen	Jan. 1, 1949 to Oct. 31, 1950
John J. Bowe	July 1, 1949—
Charles F. Dyer	July 1, 1949—
Charles S. Harrison	July 1, 1949—
Albert P. Isenhour	July 1, 1949—
Antonio F. LaSorte	July 1, 1949—
*J. Alan Nichols	July 1, 1949 to Sept. 30, 1950
Bjorn Thorbjarnarson	July 1, 1949—
*Robert L. Dow	Jan. 1, 1950 to Oct. 15, 1950
Daniel M. Hays	Jan. 1, 1950—
Joseph R. Wilder	Jan. 1, 1950—
McHenry Brewer	July 1, 1950—
John R. Fenger	July 1, 1950—
Edward A. Free	July 1, 1950—
Henry F. Kramer	Jan. 1, 1948 to June 30, 1949 July 1, 1950—
George E. Wantz, Jr.	July 1, 1950—
Donald E. Weeks	July 1, 1950—
Lester W. Martin	Oct. 1, 1950—

---

*Called into military service.

Interns

July 1, 1949 to June 30, 1950	*July 1, 1950 to June 30, 1951*	
Harris R. Anderson	David Barr	Cornell
Paul M. Brown	George N. Cornell	Cornell
Hugh C. Davidson	Frederick M. Davies	Harvard
John E. Emmett	Stuart M. Denmark	N. Y. U.

Interns—continued

July 1, 1949 to June 30, 1950

John R. Fenger
Richard H. Flandreau
Edward A. Free
Gunnar A. Gundersen
Charles M. Hamilton
Lester W. Martin
Harold M. Unger
George E. Wantz, Jr.
Donald L. Weeks

July 1, 1949 to June 30, 1950

Edward I. Goldsmith	Cornell
Roy E. Lau	Toronto
†Edward E. Longabaugh	Pittsburgh
Henry Mannix, Jr.	Cornell
Frederick M. Mitchell	Cornell
Bernard N. Nathanson	McGill
Walter R. Neill	Cornell
Luke R. Rader	Virginia
S. Frank Redo	Cornell
James A. Scofield	Texas
†George H. Vogt	Cornell

---

†July 1, 1950 to December 31, 1950.

Anesthesia

Benjamin E. Marbury, Resident	Jan.	1, 1950 to Dec. 31, 1950
Marjorie A. Crews, Assistant Resident	Jan.	15, 1950 to Jan. 15, 1951
Daniel L. Crandell, Assistant Resident	July	1, 1950—
John J. McCormick, Assistant Resident	July	1, 1950—

Dental Surgery

Bruce E. Ettinger, Intern	July	1, 1949 to June 30, 1950
Edmund E. Merhige, Intern	July	1, 1949 to June 30, 1950
Eugene M. Levine, Intern	July	1, 1950 to June 30, 1951
José F. Rodriguez, Intern	July	1, 1950 to June 30, 1951

Neurosurgery

Howard S. Dunbar, Resident	July	1, 1949 to June 30, 1951
Henry F. Kramer, Assistant Resident	July	1, 1949 to June 30, 1950
Jim F. Lincoln, Assistant Resident	July	1, 1950 to June 30, 1951

Ophthalmology

Wilfred D. McCusker, Resident	Jan.	1, 1950 to Sept. 30, 1950
Franklyn P. Bousquet, Resident	Oct.	1, 1950 to June 30, 1951
First Assistant Resident	Jan.	1, 1950 to Sept. 30, 1950
Irving Baras, First Assistant Resident	Oct.	1, 1950 to June 30, 1951
Assistant Resident	Apr.	1, 1949 to Sept. 30, 1950
Paul C. Wetzig, Assistant Resident	Jan.	1, 1950—
Edward W. D. Norton, Assistant Resident	Oct.	1, 1950—

Orthopedics

Thomas R. Ivers, Resident	June	15, 1949 to June 30, 1950
Alfred M. Francis, First Assistant Resident	July	1, 1950 to June 30, 1951
John Glasson, Assistant Resident	July	1, 1949 to June 30, 1950
Edward H. Wilson, Assistant Resident	July	1, 1950—

Plastic Surgery

William T. Berkeley, Resident	Jan.	1, 1950 to Dec. 31, 1950

Otolaryngology

John S. Martin, Resident	July	1, 1949 to June 30, 1950
Frank Hoffman, Resident	July	1, 1950 to June 30, 1951
Assistant Resident	July	1, 1949 to June 30, 1950
Rodolfo Bolanos, Assistant Resident	Feb.	1, 1949 to Jan. 31, 1950
Thomas D. Rees, Assistant Resident	July	1, 1949 to June 30, 1950
George Dorian, Assistant Resident	July	1, 1950—
John F. Struve, Assistant Resident	July	1, 1950—

Urology

James L. Green, Resident	Jan.	1, 1950 to Dec. 31, 1950
Eugenio E. Lins, First Assistant Resident	Jan.	1, 1950 to June 30, 1950
James O. Hale, First Assistant Resident	July	1, 1950 to Dec. 31, 1950
Assistant Resident	Jan.	1, 1950 to June 30, 1950
Henry E. Wolfe, Assistant Resident	Jan.	1, 1950 to June 30, 1950
*Henry C. Cleveland, Assistant Resident	July	1, 1950 to Sept. 30, 1950
Stanley J. Okulicz, Assistant Resident	July	1, 1950—
Robert M. Spellman, Assistant Resident	July	1, 1950—

---

*Called into military service.

On July 1st a six-month rotation to the general surgical service of the Hospital for Special Surgery was initiated. Two assistant residents from General Surgery served there the last six months of 1950 and a third commenced his period October 1st. This group will be increased to four in 1951. Also commencing July 1, 1950, an assistant resident from the surgical service of the Mount Vernon Hospital has been serving on the General Surgical service here.

Allocation of the beds assigned to Surgery, with admissions, operations, and deaths for the year 1950, were as follows:

				Deaths		
Pavilion Service	*Beds*	*Admissions*	*Operations*	*Oper.*	*Non-op.*	*Total*
General Surgery	120	2,851	3,065	48	6	54
Neurosurgery	15	275	415	21	1	22
Ophthalmology	19	393	376	. .	. .	. .
Orthopedics	15	170	142	1	. .	1
Otolaryngology	16	1,042	903	. .	1	1
Plastic Surgery	11	216	297	1	. .	1
Urology	42	806	589	4	2	6
Emergency	5	. . . .	. . . .	. .	. .	. .
Total	243	5,753	5,787	75	10	85

During the same period, the admissions, operations, and mortality on the private side were:

				Deaths		
Private Service	*Beds*	*Admissions*	*Operations*	*Oper.*	*Non-op.*	*Total*
General Surgery	..	2,118	1,899	33	15	48
Neurosurgery	..	209	265	13	..	13
Ophthalmology	..	257	228	..	..	..
Orthopedics	..	280	191	1	2	3
Otolaryngology	..	914	694	..	..	..
Plastic Surgery	..	167	201	..	..	..
Urology	..	730	502	8	9	17
Total	160	4,675	3,980	55	26	81
Grand Total	..	10,428	9,767	130	36	166

GENERAL SURGERY

The three pavilion services of General Surgery admitted 2,851 patients during 1950. There were 6 non-operative deaths with autopsies obtained in 4 cases. A total of 3,065 operations were performed with 48 deaths, an operative mortality of 1.56 per cent. Autopsies were obtained in 30 cases, or 62.5 per cent of the operative deaths.

2,118 private patients were admitted to General Surgery for 1,899 operations. These were followed by 33 deaths, an operative mortality of 1.74 per cent. There were 15 deaths without operation.

1950 saw new surgical advances made as did the years preceding it. Developments in any one year are not numerous, but the aggregate result over a ten-year period shows marked changes in the type of work done by the department. Let us consider some of these changes briefly. First of all, we are doing a number of procedures today which had not been developed ten years ago. This is particularly true of cardiovascular surgery and also correction of congenital anomalies and the surgery now done on the aging patient. This latter phase is becoming more important because the older group is gradually increasing its proportion to the total population. Second, the amount of surgery formerly done for infection has been decreased by chemotherapy. Osteomyelitis, for example, an infection that often begins in childhood and can persist throughout life, formerly required many hospital admissions and prolonged treatment in the out-patient department. Now it is a rarity on the surgical floors because it is readily and effectively controlled in its early stages by antibiotics.

The requirements of the day's work on a surgical service are changing. With the advancement of the frontiers of surgery through new knowledge gained chiefly from research, more controls are necessary. The total effort now required to complete many of the new procedures successfully is great. Resection of a coarctated segment of the aorta, for example, requires not only several hours of meticulous surgery at the operating table, but elaborate tests on the patient in advance of the operation, and careful attention to many details in the postoperative period. As our methods become perfected, they become more and more dependent upon highly-trained personnel for their proper execution. Not only must the surgeon today possess greater knowledge and judgment than his predecessor, but he requires the special assistance and cooperation of a number of skilled associates.

During 1950 special attention was directed toward a number of clinical problems whose solution depends not only on the clinical facilities of the hospital but also those available in the laboratories for surgical research. These particular problems have included water and electrolyte studies, cardiovascular surgery, liver disease, cancer of the esophagus, peptic ulcer, and gastric cancer research.

NEUROSURGERY

Dr. Bronson S. Ray, Attending Surgeon in charge

Neurosurgery has continued to work closely with Dr. Harold Wolff's section of Neurology in the Department of Medicine. Dr. Ray has been assisted by two senior neurosurgeons and his resident staff of two with an intern rotating from general surgery. A total of 484 patients were admitted to the pavilion and private services of Neurosurgery, on whom 680 operations were performed. There were 34 deaths following operation, a mortality of 5 per cent.

Under Dr. Ray's direction, neurosurgical studies on the sympathetic nervous system were continued until the illness of Dr Arthur Console forced abandonment of the formal program. Since that time only isolated observations have been feasible.

A method of intracranial venography has been perfected which permits determination of any change in the normal venous pattern due to intracranial disease. The method consists of injecting diodrast through a catheter introduced into the anterior sagittal sinus. The development of a serial roentgenography, which has gone hand in hand with this work, has made adequate visualization of the venous system possible. This method has been described in three publications. The technique makes it possible to determine before operation whether or not an intracranial neoplasm has invaded the dural sinuses and whether the compensatory circulation is adequate.

OPHTHALMOLOGY

Dr. John M. McLean, Attending Surgeon in charge

Admissions to the 19 pavilion beds of Ophthalmology totalled 393 for 1950. There were 376 operations performed with no deaths. 257 private patients were admitted for 228 operations, also without a death.

The senior staff numbers eleven, with a resident staff of four. The service is on a nine-month schedule, which brought the promotion date to October 1, 1950 this year. Dr. Wilfred D. McCusker, who completed his ophthalmological training on that date, has entered practice in Newark, New York. Dr. Richard C. Troutman was appointed Research Fellow in Ophthalmology on January 1, 1950, following his residency, but was forced to leave because of illness.

Almost the entire staff of Ophthalmology was engaged in intensive study on the application of the new agents, ACTH and Cortisone, to various diseases of the eye during the year. The results have been very gratifying. Starting with systemic administration, methods were developed for controlling many types of acute and chronic eye disease, some of which had hitherto been considered hopeless. Following this, methods were devised for using Cortisone locally in the eye, both in the form of drops and subconjunctival injections. These studies, which were begun under a United States Public Health Service grant, are being continued under a new grant from the same source.

A survey of congenital cataracts in children born to mothers vaccinated during pregnancy has been conducted in the Out-Patient Department by Dr. Stewart Snyder. Working with Dr. Irving Wright, Dr. McCusker completed a study of the effects of dicumarol on chronic glaucoma. Motor anomalies of the eye have been studied by Dr. Edward Dunlap, assisted by an orthoptic technician.

ORTHOPEDICS

Dr. Frederick L. Liebolt, Attending Surgeon in charge

170 pavilion patients were admitted to the 15 orthopedic beds during 1950. 142 operations were performed with one death. 280 patients were admitted to the private orthopedic service for 191 operations with one death. The care of these patients is carried by a senior staff of nine, a resident and an assistant resident appointed to this service. An additional assistant resident and an intern rotate from general surgery through orthopedics and plastic surgery, dividing their time equally between these two specialties. Recent demands of the military forces, however, have eliminated the position of the rotating assistant resident.

On completion of his resident appointment July 1st, Dr. Thomas R. Ivers accepted a position at the New York State Rehabilitation Hospital in Haverstraw, New York. Dr. John Glasson is continuing his orthopedic training at the Shriner's Hospital for Crippled Children in Greenville, South Carolina.

A special clinic was established in October to give greater attention to poliomyelitis patients. This clinic is conducted jointly by Dr. Liebolt, Dr. Hansson of Physical Medicine, Dr. McDowell from the Department of Medicine, Miss Soule and Mrs. Ruggles of Social Service, and Dr. Dring, also of the Orthopedic Service, together with a brace maker.

Dr. Liebolt's research group is subsidized by a generous grant from the Marguerite Davis Estate. He is devoting special attention to the foot problems of children and has published several articles on this subject as well as discussing it at numerous medical meetings during the year.

OTOLARYNGOLOGY

Dr. James A. Moore, Attending Surgeon in charge

During 1950, 1,042 patients were admitted to the pavilion service of Otolaryngology. 903 operations were performed on this group without a postoperative death. There were 914 patients admitted to the private service with 694 operations performed, also without a death. Dr. Moore has been assisted by a senior staff of 15 and a resident staff of three. Dr. James Holman returned to the senior staff in January 1950, following a period of practice in Charleston, South Carolina. Dr. John Martin completed his residency on June 30th and entered practice in New York City.

There is a trend toward more extensive surgical treatment of cancer in otolaryngology, and increased attention has also been directed toward disorders in hearing and speech. In November, Miss Margaret Soisson, audiologist, joined the staff to fill a long-standing need. With this added service more attention can be directed to the selection of patients for the Lempert fenestration procedure, while at the same time, patients who are found to be unsuitable for this operation may be given some assistance with hearing aids. Assisting the hard of hearing constitutes a true rehabilitation measure.

PLASTIC SURGERY

Dr. Herbert Conway, Attending Surgeon in charge

To the pavilion service of this specialty 216 patients were admitted in 1950 for 297 operations. There was one post-operative death. 167 private patients were admitted for 201 operations with no deaths.

Dr. Richard B. Stark, a member of the resident staff for several months in 1948, was appointed to the senior staff in October. Dr. John C. Weeter returned to service with the Veterans Administration on January 1, 1950 following a six-months residency here. Dr. William T. Berkeley served as Resident Plastic Surgeon for the year of 1950.

The program covering care of patients with harelip and cleft palate anomalies has been continued with support from the New York State Association for Crippled Children. The assistance of a speech therapist, an orthodontist, a psychiatrist, and a social worker is used in this work. Dr. Cole and Dr. Eby have continued in the Dental Clinic as Astor Assistant Orthodontic Surgeon to Out-Patients and Consultant in Orthodontia, respectively. Improved speech has been effected in complicated cases of cleft palate through adjuncts to therapy as well as new operative techniques.

Under a grant from the United States Public Health Service, experimental work is being carried out by Dr. Conway and Dr. Doyle Joslin on the vascularization of skin grafts, as well as experiments with homologous skin transplants. Further work has been completed on clinical tests to establish the status of circulation in pedicle flaps. The basic information gained from these tests is used in the field of homotransplantation, namely, transplantation of skin from one individual to another. To date, however, this procedure has not been accomplished with complete success or permanence in humans.

UROLOGY

Dr. Victor F. Marshall, Attending Surgeon in charge

806 patients were admitted to the 42 pavilion beds of Urology during 1950, on whom 589 operations were performed with 4 deaths, an operative mortality of 0.7 per cent. To the private urological service 730 patients were admitted, on whom 502 operations were performed. There were 8 postoperative deaths on this service, an operative mortality of 1.6 per cent.

The senior urological staff under Dr. Marshall totals 30, with a house staff of five. On completion of his residency, Dr. Robert D. Deans was appointed Assistant Attending Surgeon at The New York Hospital and entered urological practice in New York City. Dr. Paul F. Boyd entered practice in Cleveland, Ohio, on completing his residency at the same time. Dr. Henry E. Wolfe returned to service with the Navy on July 1, 1950.

Since merging the two urological services in 1949, certain minor changes have been made in this section. The Out-Patient Department is manned now chiefly by members of the resident staff. Two special clinics, for tuberculosis of the genito-urinary system and for sterility and impotence, were unusually active throughout the year. Chronic interstitial cystitis has been found to be very favorably influenced by ACTH and Cortisone. This has been given special study by Dr. Albert Pacquin, who has devoted much time and effort to this very distressing condition. The use of vesical mucosal grafts to bridge defects in the urinary tract is being investigated by Dr. Henry Cleveland and Dr. Robert Spellman. If successful, this method will contribute materially to the improvement of present techniques now used for hypospadias. Dr. E. C. Coats has initiated investigation in the use of ultrasonic energy in the treatment of urinary calculi.

Evaluation of radical surgery in the treatment of extensive carcinomas of the bladder and prostate continues. Perfection of methods for earlier diagnosis in malignancies of the genitourinary tract has been continued with Dr. Papanicolaou. Detailed studies on patients with chronic recurring calculi of the urinary tract have been carried out with Dr. Ephraim Shorr of the Endocrinology Section of the Department of Medicine.

The bed service of the Department of Surgery could not function adequately without the supporting services that do not have bed allotments. These include Anesthesia, Surgical Pathology, Dental Surgery, Physical Medicine, and the Laboratories for Surgical Research. These sections are intimately associated with the daily care of patients.

ANESTHESIA

Dr. Joseph F. Artusio, Jr., Anesthetist in charge

Dr. Artusio has been assisted by a resident staff of four, 19 nurse anesthetists and 3 student nurse anesthetists during 1950. Dr. Benjamin E. Marbury and Dr. Marjorie A. Crews completed their residency in anesthesiology on December 31, 1950. Dr. Marbury will be appointed to the senior staff here and Dr. Crews has accepted an appointment as head of the department of anesthesia at the Women's Medical College of Pennsylvania. Dr. John J. McCormick and Dr. Daniel L. Crandell, both graduates of Cornell, were appointed assistant residents in anesthesiology July 1, 1950 for a two-year period.

The research on rectal pentothal during the past year has made a significant contribution to the field of pediatric anesthesia. A group of anti-curare compounds were developed, giving the anesthetist a safe, effective antidote to any level of curarization. *D*-tubocurare and Flaxedil have been studied and the dose-response relationship in anesthetized man established for these curarizing preparations.

Undergraduate instruction in anesthesia is so designed to give the fundamental theory of anesthetic agents and techniques in the third year. The fourth-year lectures are of a more practical nature, with demonstration of the various practical techniques. Two full-time elective courses in anesthesia are offered each month to fourth-year students.

The total number of anesthetics given by this section in a twelve-month period has increased by 50 per cent over the past three years. During 1950, 9,590 anesthetics were administered, with 57 complications or 0.6 per cent. 27 of the complications were pulmonary, of which 50 per cent were directly associated with anesthesia. There were 20 per cent fewer pulmonary complications in 1950 than in 1949. Seven of the 75 postoperative pavilion deaths were related to anesthesia, 3 occurring on the operating table.

SUMMARY OF COMPLICATIONS

Total anesthetics given by the anesthesia staff in 1950		9,590
Give by outside anesthetists in 1950		139
Total anesthetics given in 1950		9,729
Pulmonary complications	28	
Non-pulmonary complications	29	
Total complications	57	
Total thrombophlebitis	35	
Thrombophlebitis with pulmonary infarction	6	

Surgery has advanced to where it now encompasses extensive procedures in all parts of the body, even within the heart itself. The successful accomplishment of such operations is dependent upon and materially facilitated by anesthesia which is administered by individuals who are also clinical physiologists and pharmacologists. Such specialists are the product of an intensive resident training program in anesthesiology, such as we have established here. There is an urgent need throughout the country for these highly-trained anesthetists. Our program of practical training in anesthesia for these physicians includes a firm grounding in the basic sciences related to this specialty.

SURGICAL PATHOLOGY

Dr. John M. Pearce, Surgical Pathologist

Dr. Pearce has had Dr. John Ellis and Dr. Stephen Vogel as his immediate assistants since July 1, 1950. Like Dr. Pearce, they also hold appointments in the Department of Pathology as well as in Surgery. During 1950 a total of 8,262 specimens were examined by this section as compared with 7,646 in 1949. 1,412 of the specimens, or 17.1 per cent, were from patients with malignant disease.

By the careful examination and study of specimens removed at operation, the surgical pathologist establishes the final diagnosis. Therapy and prognosis are often determined by his findings. Instruction in this field is of first importance to both graduate and undergraduate student. For the medical students, a formal course is given in the fourth year. Members of the resident staff, both interns and assistant residents, rotate through this special field. During 1950, 25 members of the house staff participated in the work of this section, 17 from the Department of Surgery and 8 from the Department of Pathology.

OPERATING ROOMS

Under the supervision of an advisory committee, all the operating rooms for both pavilion and private patients function as a single unit. It is directed as a separate department of the nursing service by Miss E. E. Tuffley, Assistant Professor of Surgical Nursing, and her immediate associates, Miss Edith Olson, Miss Helma Teder, Miss Margaret DeWitt, and Miss Lucy Hickey. 11,426 operations and treatments were carried out in 1950 as compared with 10,984 in 1949. The operating schedule has been limited to a five-day week and it is not anticipated that with the continued nursing shortage the schedule will be soon extended.

The routine hand scrub and skin preparation was radically changed in January 1950. G-11 preparations are now used instead of soap and benzalkonium chloride instead of alcohol. Bacteriological studies and clinical experience have demonstrated that these new techniques accomplish not only more efficient and prolonged sterilization of the skin surfaces, but at the same time reduce scrubbing time from ten minutes to three.

New equipment has included a new operating table for the Ear, Nose and Throat service and the installation of a dark room on the Tenth Floor to develop x-ray films taken in the operating rooms. The demand for x-rays taken during a surgical procedure has increased greatly during recent years, and this dark room will eliminate the time formerly consumed in sending the plates to the Radiology Department for development. A conductive floor was installed in one operating suite to determine its value in reducing the explosion hazard from anesthesia. The floor first tried proved unsatisfactory and has been replaced. Such safety precautions are very costly, but as yet the hazard is not felt to have been completely overcome.

Postoperative Recovery Unit. In October, a Postoperative Recovery Unit was opened to provide the constant and expert care that is considered optimal for patients in the period immediately following an operative procedure under anesthesia. This unit has added immeasurably to the safety of patients undergoing the extensive operations that are so frequently done these days. This service is the culmination of a recommendation made by the physicians and surgeons of the hospital to the Governors in 1805, which stated: "It is proper also that a room be fitted up with beds, for the reception of patients directly after having undergone any operation; the arranging this room to be according to the direction of the Surgeon." For the past three years the Surgeon-in-Chief has been urging the establishment of such a unit.

DENTAL SURGERY

Dr. George F. Egan, Attending Dental Surgeon in charge

1950 was a year of consolidation for the Dental Clinic after its clinical and administrative reorganization in 1949 under Dr. Egan's supervision. Numerically, the service almost doubled its patient load. Consultations from other departments increased decidedly, as did the number of admissions to the surgical pavilions of patients whose dental surgery required operating room facilities. Teaching expanded to include instruction for the resident staff of General Surgery in the treatment of fractured jaws, lectures to Radiology students on oral anatomy and dental radiology, and instruction to the students of dental hygiene on oral pathology. The program for training dental hygienists was increased to 70 students. They give oral prophylaxis care to patients in the Dental Clinic and in the new three-chair clinic in the M Building, and to pavilion patients of Medicine and Surgery. A film library of dental radiographs of special interest has also been established. Meetings of the staff are now held each month to discuss cases. These meetings have been well attended by many dentists not on our staff and have evoked favorable comment from members of the profession.

PHYSICAL MEDICINE

Dr. Kristian G. Hansson, Director of Physical Medicine

Under Dr. Hansson's direction, 27,756 treatments were given to 2,647 patients by this service during 1950. The activities of this section show a definite increase in rehabilitation work among the hospital's in-patients. This includes both the polio service and other services, and has been aided by the addition of a new and fully equipped room and provision for extra physiotherapeutic assistance during the polio season. The expenses of the added personnel have been met by the National Foundation for Infantile Paralysis.

Early and more complete recovery is being accomplished by a careful rehabilitation program. Rehabilitation means maximum recovery in patients who have undergone severe trauma, operation or disease. These cases include fractures, polio, arthritis, orthopedic disabilities, and degenerative diseases of the nervous and circulation systems. Effort is made to recover lost muscle function, locomotion and stability. This is begun while the patient is in the hospital and continues in the Out-Patient Department when necessary. It covers muscle re-education in the therapeutic pool, exercises for coordination and balance, to help build up the muscles necessary to walking, and work in the special rehabilitation gymnasium, where instruction is given in activities common to daily living.

OUT-PATIENT DEPARTMENT

Dr. S. W. Moore, Attending Surgeon in charge

The Department of Surgery maintains 14 separate out-patient clinics, whose integration and organization require constant supervision and revision in order to maintain patient care at maximum efficiency. During 1950 20,000 new patients were seen in these clinics for a total of 100,400 patient visits. In the Minor Surgery Clinic, 1,318 operations were performed and 570 casts applied.

The demands of the clinics require the services of a large staff, both senior and resident. In addition to caring for a great many ambulatory patients, much teaching is carried on in the clinics. This includes not only instruction to the medical students and the resident staff, but to the graduate and undergraduate nurses, the technicians, clinic aids and other special personnel. The activities of the various clinics have undergone little change during the year, with the exception of the Emergency Unit. The demands made upon this section continue to increase. With shorter working hours and closer adherence to the observation of holidays by the institution, the Emergency Unit has been called upon to act as a buffer for the rest of the hospital, bridging the gap in hospital service when the clinics and admitting offices are closed. The increased work-load for this section has, in the opinion of the Surgeon-in-Chief, reached a point where the likelihood of error is of real concern. In the event of a major or even minor catastrophe, the Unit would not be able to function adequately. Its beds are often used for overflow pavilion cases, and at night, over weekends, and on holidays it becomes another out-patient clinic.

One of the most frequent conditions requiring emergency treatment is fractures. Dr. Preston A. Wade, assisted by the resident staff, evaluates and cares for these problems. A room in the Emergency Pavilion has been remodelled to provide for emergency fracture service. It is equipped with a fluoroscope, so that subsequent reduction of the fracture and application of the cast can now be accomplished efficiently and quickly on the spot. X-ray examination of these cases is provided by the facilities of the adjacent Vincent Astor Diagnostic Service.

As the result of demands from the military forces and the speed-up in industrial production, the problem of supplying both professional and non-professional personnel has become acute in some instances. With the uncertainty of the present world situation, it is very possible that some curtailment of our present out-patient activity may be necessary during the coming year. Because of the possibility of a military attack, the Department of Surgery has, in conjunction with municipal and state agencies, laid specific plans for meeting widespread catastrophe should it occur. Plans for the organization and utilization of all available facilities within the institution under such circumstances have been worked out and are in the possession of the Director of the Hospital.

The smooth and efficient operation of an out-patient department is dependent in no small part upon the nursing personnel and the clinic aides. We are most fortunate in having Miss Kathleen Newton as Head of the Out-Patient Department Nursing Staff and Miss Cathleen Tooley as Chief of the Clinic Aides in Surgery.

SURGICAL FOLLOW-UP CLINIC

Under the direction of Dr. S. W. Moore, this section has been completely reorganized. Because of the ever-increasing load of cases that builds up from year to year, it has become necessary to limit follow-up studies to those patients whose results are of special interest to the Department.

16,290 cases are currently being followed by this section, with 28,265 cases closed. Follow-up examinations were arranged and carried out for 7,094 patients. 5,431 patients were examined in the 29 Sunday follow-up clinics during the year, of which number 1,550 were referred to the Out-Patient Department for further study and 71 were advised to re-enter the Hospital.

The follow-up clinic continues to function each Sunday morning in the Out-Patient Department. It is under the supervision of senior staff members, assisted by the resident staff. In addition to being a means of evaluating the many surgical methods now employed for therapy, one of the most important contributions made by this clinic is that the studies carried on through it establish standards for evaluating the results and criteria needed to anticipate the development of both associated and unrelated diseases.

LABORATORIES FOR SURGICAL RESEARCH

The Laboratories for Surgical Research have been under the immediate direction of Dr. C. G. Child, assisted by Dr. Ward D. O'Sullivan. The facilities have been utilized to their capacity by all sections of the Department.

The following studies were pursued during the year: Methods of bridging defects in the esophagus, revascularization of the myocardium, the effects of arterio-venous fistulae on myocardial ischemia, variations in blood vessel anastomosis, preservation of blood vessels for grafts, surgical approach to cardiac valves, viral infections of the myocardium, experimental cirrhosis of the liver, the effect of portacaval shunts on liver function, obliteration and resection of the portal vein, alterations in body fluids and electrolytes, anti-curare substances, homologous skin transplants, methods of evaluating the vascularization of skin grafts, and vesical mucosal grafts for defects of the urinary tract.

Dr. Mary Ann Payne of the Department of Medicine has been working in the laboratory with Dr. Child and Dr. O'Sullivan on liver disease studies. They constitute a team for evaluating and treating patients throughout the hospital who may be benefitted by surgical therapy. The Surgical Metabolism Unit, headed by Dr. Child and Dr. Helena Gilder, assisted this year by Dr. Arthur Gore and Dr. Roy D. McClure, has pursued exhaustive studies on total body water, extracellular fluid, plasma volume, sodium, potassium and other blood constituents. They have carried out these studies on a number of severely ill patients. Dr. William A. Cooper, working in conjunction with Dr. Papanicolaou of the Department of Anatomy, has developed a more adequate method for diagnosing cancer of the stomach. The Department has encouraged and fostered a blood vessel bank which is under the supervision of Dr. Edward Keefer and Dr. Kenneth Hui. This project is sponsored by the New York Society for Cardiovascular Surgery and is supported by funds from the New York Heart Association.

Two members of the resident staff, Dr. Arthur L. Gore and Dr. Roy D. McClure, were given the opportunity of special research assignments this year in the rotation of their training. Original research by members of the student body has also been encouraged.

Grants in aid of surgical research for the year 1950 totalled $132,178, as follows:

United States Public Health Service:	
Effects of ACTH and Cortisone on diseases of the eye	$ 21,427
Experimental pancreaticoduodenectomy	7,750
Cardiovascular research	7,000
Plastic surgery	2,493
The fate of an artery implanted in the myocardium	2,046
Experimental production of lung abscesses	1,895
Anatomic study of perineal structure	1,771
	$ 44,382
Marguerite Davis Estate—Orthopedics	25,000
E. C. Coats Fund—Urology	11,696
James Foundation—Ophthalmology	7,500
New York State Association for Crippled Children, Inc.	5,800
Vincent Astor—Plastic surgery	5,000
Given Foundation	5,000
Lasdon Foundation—Urology	5,000
Childs Foundation—Tumor clinic	4,000
New York Heart Association	3,575
Katherine Lilly Conroy	2,500
Marguerite Davis Estate—General surgery	2,500
Marie H. Clemens, Inc.—Orthopedics	2,500
Lederle Company—Anesthesia	1,500
American Cancer Society	1,350
Miscellaneous donations to ophthalmological research	1,109
Ettinger Fund	1,000
Ocular Fund	546
James Berglos—Otolaryngology	500
Colorado Fuel & Iron Corporation—Ophthalmology	500
Miscellaneous donations	1,220
Total received in 1950	$132,178

With the close of 1950, the Department of Surgery sees shadows gathering over it similar to those which clouded the horizon late in 1941. We have already lost several members of the resident staff to the military forces, and as the nation increases its preparedness to meet the eventualities of atomic warfare, we expect many more to be called. Holding equal importance with the production of military equipment in the schedule of preparedness is adequate medical training to provide vital know-how for care and salvage of the wounded, both military and civilian. Should we become engaged in a war that is likely to bring atomic bombs to our cities, it can be expected that the number of casualties among the civilian population will far exceed those of the military forces. Present estimates of possible casualties from this type of warfare far exceed any previously recorded. Thus the need for well trained surgeons as a part of the preparedness plan becomes of even greater importance than it was in World War II. It may even be said that the availability of highly trained surgeons will determine to an appreciable degree the salvage and survival rate of the wounded. To insure our preparedness, therefore, every effort should be made to maintain our medical training programs until such time as we are engaged in an all-out war. Likewise, our attitude towards research and investigation should be that of intensifying our efforts to further it. Advancement in knowledge and accomplishment, for surgery as well as medicine and all other sciences, comes only from research. Therefore, research should be supported as long as possible, and should not be the first relinquished, as some believe.

FRANK GLENN, M.D.

January 1951.

BIBLIOGRAPHY, 1950

ANDRUS, WILLIAM DEWITT

Peripheral Arterial Embolism, with Particular Reference to an Evaluation of Conservative Treatment. Arch. Surg., 60: 511, 1950.

with Steinberg, I. and Dotter, C. T. Angiocardiography in Thoracic Surgery. Surg. Gynec. and Obst. 90: 45, 1950.

with Nickel, W. F., Jr. and Gordon, G. Studies on Lysozyme as an Etiologic Agent in Ulcerative Colitis. J. Gastroenterology. In press.

with Nickel, W. F., Jr. and Gordon, G. Studies on Several Cholinergic Drugs as Possible Etiologic Agents in Ulcerative Colitis. J. Gastroenterology. In press.

with Nickel, W. F., Jr. and Lake, Michael. Possible Role of Pancreatic Enzymes in the Etiology of Ulcerative Colitis. J. Gastroenterology. In press.

with Hoffman, R. S. and Dingwall, J. A. The Growth Effects on Chick Fibroblast Cultures of Fractions of Adult and Embryonic Tissue Extracts Following Differential Centrifugation. Science. In press.

ARTUSIO, JOSEPH F., JR.

Anesthesia in Surgical Emergencies. S. Clin. N. A. 30: 577, April, 1950.

with Trousdell, M. A Comparative Study of Rectal Pentothal and Morphine for Basal Anesthesia upon Children for Tonsillectomy. Anesthesiology II, No. 4, July, 1950.

with Riker, W. F., Jr. and Wescoe, W. C. Anti-curare Activity of 3-Acetoxy Phenyltrimethylammonium Methylsulfate (Nu-2017) in Man. Federation Proc. 9: No. 1, March, 1950.

with Riker, W. F., Jr. and Wescoe, W. C. Studies on the Interrelationship of Certain Cholineric Compounds. IV. Anticurare Action in Anesthetized Man. J. Pharmacology and Experimental Therapeutics 100: No. 2, Oct., 1950.

BALENSWEIG, IRVIN S.

The Treatment of Late Complications of Ankle Joint Fractures. Compensation Med. 3: 31, 1950.

BARNES, WILLIAM A.

Acute Venous Thrombosis and Embolism. Surg. Cl. N. A. 30: 387, April, 1950.

BENEVENTI, FRANCIS A.

Solitary Pelvic Kidney. Urologic and Cutaneous Review 54: 201, 1950.

Prostatic Enlargement. J. of Insurance Med. 5: No. 1, Jan. 1950.

with Twinem, F. P. Transection of Ureter Following Uterine Instrumentation. J. Urol. 63: 22, 1950.

BERLINER, MILTON L.

Epithelial Downgrowth Following Cataract Operation. Trans. Intern. Congress of Ophth. In press.

Cornea and Sclera. Arch. Ophth. In press.

Biomicropsy of the Eye, Vol. II. Pub. Paul B. Hoeber Co., N. Y.

CHILD, C. GARDNER, III

New Concepts in Surgery of the Pancreas. Med. Ann. District Columbia, II. No. 1, 1950.

Proctology. The Specialties in General Practice. (Russell L. Cecil, Editor). W. B. Saunders Co., Phila., Pa., 1950.

with Holswade, G. R. Replacement and Maintenance of Water and Electrolytes and Proteins. Surg. Cl. N. A. 30: 315, April, 1950.

with Milnes, R. F., Holswade, G. R. and Gore, A. L. Sudden and Complete Occlusion of the Portal Vein in the *Macaca Mulatta* Monkey. Ann. Surg. 132: 475, 1950.

with O'Sullivan, W. Ileocecal Intussusception caused by Lymphoid Hyperplasia. J. Pediatrics. In press.

CONSOLE, A. DALE

with Ray, B. S. and Dunbar, H. S. Pheochromocytoma: The use of an Adrenolytic Agent in the Operative Management. Surgery 28: 428, 1950.

with Ray, B. S. Bodily Adjustments in Man During Stress in the Absence of Most Visceral Afferents and Sympathetic Nervous System Regulation. Assn. for Research in Nervous and Mental Diseases. Vol. XXIX, Chapter VII. The Williams and Wilkins Company, Balto., Md., 1950.

CONWAY, HERBERT

Reconstructive Surgery following Radical Operation for Malignant Tumors of the Head and Neck. Ann. Surg. 131: 64, 1950.

with Neumann, C. G. Transparent Surgical Drapes for the Visualization of Landmarks During Operative Procedures. Plastic and Reconstr. Surg. V: 494, 1950.

with Pack, G. T. and Ariel, I. The Surgical Treatment of Cancer of the External Ear, Auditory Meatus and Mastoid. Text Book—Treatment of Cancer and Allied Diseases, 1950.

with Stark, R. B., Weeter, J. C., Garcia, F. A. and Kavanaugh, D. Complications of Decubitus Ulcers in Patients with Paraplegia. Plastic and Reconstr. Surg. In press.

Combined Use of the Push-back and Pharyngeal Flap Procedures in the Management of Complicated Cases. Plastic and Reconstr. Surg. In press.

Micromastia Corrected by Transplant of Skin and Mammary Tissue from Opposite Breast. Plastic and Reconstr. Surg. In press.

Cornell, Carleton M.

with Hardy, R. Plateau Fractures of the Tibia. Surgery 28: 735, 1950.

Cornell, Nelson W.

with Shehadi, W. H. and Sharnoff, J. G. Leiomyomas of the Esophagus. Surgery 28: 881, 1950.

Dingwall, James A.

Current Concepts in the Management of Systemic and Local Surgical Infections. Surg. Cl. N. A. 30: 363, April, 1950.

with Maisel, B. Primary Suture of the Divided Cervical Trachea. Surgery 27: 726, 1950.

with R. S. Hoffman and Andrus, W. DeW. The Growth Effects on Chick Fibroblast Cultures of Fractions of Adult and Embryonic Tissue Extracts Following Differential Centrifugation. Science. In press.

Dunbar, Howard S.

with Ray, B. S. and Console, A. D. Pheochromocytoma: The Use of an Adrenolytic Agent in the Operative Management. Surgery 28: 428, 1950.

with Ray, B. S. Thrombosis of the Superior Sagittal Sinus as a Cause of Pseudotumor Cerebri: Methods of Diagnosis and Treatment. Trans. Amer. Neurological Assn., 1950.

with Ray, B. S. and Dotter, C. T. Dural Sinus Venography. Radiology. In press.

with Ray, B. S. and Dotter, C. T. Dural Sinus Venography as an Aid to Diagnosis in Intracranial Disease. J. Neuro. In press.

Dunlap, Edward A.

Principles and Choice of Surgery in Vertical Muscle Deviations. Trans. International Congress of Ophthalmology. In press.

Anomalies of Divergence. Instruction Section of American Acad. Ophth. and Otol., 1950.

Eckel, John H.

Acute Cholecystitis. Surg. Cl. N. A. 30: 451, April, 1950.

Foot, N. Chandler

with Humphreys, G. A. and Whitmore, W. F., Jr. Renal Tumors. Pathology and Prognosis in 295 Cases. J. Urol. In press.

Glenn, Frank

Current Trends in the Treatment of Hernia. Ohio State Med. J. 46: 25, 1950.

Annual Report of the Department of Surgery, 1949. The New York Hospital—Cornell Medical Center, February, 1950.

The Surgical Treatment of Acute Cholecystitis. Surg., Gynec. and Obst. 90: 643, 1950.

with Beal, J. M. The Fate of an Artery Implanted in the Myocardium. Surgery 27: 841, 1950.

with Harrison, C. S. The Surgical Treatment of Peptic Ulcer. Report of a Year's Experience. Ann. Surg. 132: 36, 1950.

Coarctation of the Aorta. Harlem Hosp. Bull. 3: 61, 1950.

Secondary Operations for Peptic Ulcer. Ann. Surg. 132: 702, 1950.

with Moore, S. W., Forkner, C. and Almy, T. P. The Treatment of Peptic Ulcer, R. I. Med. J. 33: 179, April, 1950.

The Present Status of the Surgical Treatment of Peptic Ulcer. J. A. M. A. In press.

with Harrison, C. S. Gastric Resection in the Treatment of Peptic Ulcer. Arch. Surg. In press.

with O'Sullivan, W. D. Coarctation of the Aorta. N. Y. State J. Med. In press.

with Holswade, G. S. and Gore, A. L. The Fate of an Artery Implanted in the Myocardium. Amer. Coll. of Surgeons Publication. In press.

Editorial: Surgery and Rearmament. Ann. Surg. In press.

GORDON, DAN M.

The Use of ACTH and Cortisone in Ophthalmology. Ophthalmologia Ibero Americana XII, No. 2. II Trimestre Quarter, 1950.

with McLean, J. M. Effects of Pituitary Adrenocorticotropic Hormone (ACTH) Therapy in Ophthalmologic Conditions. J. A. M. A. 142: 1271, April 22, 1950.

The Eye in the Toxemias of Pregnancy. J. A. M. A. In press.

with McLean, J. M. and Koteen, H. The Use of ACTH in Ophthalmology. Proc. Second Clinical ACTH Conf., by The Blakiston Co. In press.

with McLean, J. M. and Koteen, H. Clinical Experiences with ACTH and Cortisone in Ocular Diseases. Trans. Amer. Acad. Ophth. and Otol. In press.

GORE, ARTHUR L.

with Glenn, F. and Holswade, G. S. The Fate of an Artery Implanted in the Myocardium. Amer. Coll. of Surgeons Publication. In press.

with Child, C. G., III, Holswade, G. R., Milnes, R. F. Sudden and Complete Occlusion of the Portal Vein in the *Macaca Mulatta* Monkey. Ann. Surg. 132: 475, 1950.

HANSSON, KRISTIAN G.

Physical Medicine in Shoulder Disabilities. Arch. Physical Med. and Rehab. In press.

HARRISON, CHARLES S.

with Glenn, F. The Surgical Treatment of Peptic Ulcer. Report of a Year's Experience. Ann. Surg. 132: 36, 1950.

with Glenn, F. Gastric Resection in the Treatment of Peptic Ulcer. Arch. Surg. In press.

HOFFMAN, RUTH S.

with Dingwall, J. A. and Andrus, W. DeW. The Growth Effects on Chick Fibroblast Cultures of Fractions of Adult and Embryonic Tissue Extracts Following Differential Centrifugation. Science. In press.

HOLMAN, CRANSTON W.

Simple Excision of Lung Abscess. Surgery 27: 546, 1950.

Treatment of Severe Bleeding from Peptic Ulcer. Surg. Cl. N. A. 30: 421, April, 1950.

with Dotter, C. T. and Steinberg, I. Lung Cancer Operability: Angiocardiographic Study of 53 Consecutive Proved Cases of Lung Cancer. Am. J. Roentgen. and Rad. Therap. 64: 222, 1950.

with Grace, W. J., Wolf, S. and Wolff, H. G. The Action of Various Pharmacologic and Other Agents on the Colon of Man. Arch. Surg. 61: 1036, 1950.

HOLSWADE, GEORGE S.

with Glenn, F. and Gore, A. L. The Fate of an Artery Implanted in the Myocardium. Amer. Coll. of Surgeons Publication. In press.

HOTCHKISS, ROBERT S.

Types of Hypogonadism in the Male and Their Treatment. Chicago Med. Soc. Bull. Apr. 8, 1950.

Concommitant Bilateral Testicular Tumors. Amer. Assn. Genito-Urinary Surgeons. J. G.-U. Surg., April, 1950.

Stricture of Urethra. N. Y. Soc., Amer. Urol. Assn. In press.

Etiology and Diagnosis in the Treatment of Infertility in Men. American Lectures in Endocrinology. In press.

Appraisal of Therapy for Infertile Men. Sterility Society, San Francisco. In press.

Infertility in the Male. Chapter in Dr. Meredith Campbell's Textbook. In press.

with Selter, R. Manual on Surgical Nursing. In press.

HUMPHREYS, GUSTAVUS A.

with Foot, N. C. and Whitmore, W. F., Jr. Renal Tumors. Pathology and Prognosis in 295 Cases. J. Urol. In press.

LIEBOLT, FREDERICK LEE

The Use of Capsulectomy and Arthroplasty for Limitation of Finger Motion. Surg., Gynec. and Obst. 90: 103, 1950.

Obturator Neurectomy for Painful Hip. Am. J. Surg. 79: 427, 1950.

Foot Problems in Children. Surg., Gynec. and Obst. 90: 461, 1950.

Tears of the Medial Meniscus. Surg. Cl. N. A. 30: 555, April, 1950.

A New Method for Repair of the Distal Radioulnar Ligaments. N. Y. State J. Med. In press.

Foot Problems in Children. The Year Book of Pediatrics. In press.

LORD, JERE W., JR.

Traumatic Lesions of the Arteries. Surg. Cl. N. A. 30: 377, April, 1950.

Trauma to the Arterial Insufficient Foot. Am. J. Surg. In press.

Surgical Management of Secondary Hypersplenism. Surgery. In press.

A Discussion of the Optimal Age for the Selection of Patients for Surgical Intervention in Congenital Heart Disease. N. Y. State J. Med. In press.

MACFEE, WILLIAM F.

Non-contusive Radical Mastectomy. Ann. Surg. 131: 969, 1950.

The Problems Associated with the Diagnosis and Treatment of Cancer of the Breast. The Medical Comment 28-33, June, 1950. (Publication of the Cambria County Med. Soc., Pennsylvania.)

The Surgery of World War III. The Military Surgeon. In press.

MAISEL, BERNARD

with Dingwall, J. A. Primary Suture of the Divided Cervical Trachea. Surgery 27: 726, 1950.

with Weintraub, S. Prolapsing Gastric Mucosa Through Gastrojejunostomy Simulating Cancer of the Stomach. Surgery. In press.

MARSHALL, VICTOR F.

A Reconsideration of the Treatment of Urinary Infections. Med. Cl. N. A. 34: 1, March, 1950.

with Whitmore, W. F., Jr. Simple Cystectomy for Cancer of the Urinary Bladder, One Hundred Consecutive Cases: Two Years Later. J. Urol. 63, 232, 1950.

with Whitmore, W. F., Jr., Petro, A. T., Poppell, J. W., Grant, R. N. and Rawson, R. W. Osteitis Pubis Treated with Adrenocorticotropic Hormone. J. Urol. In press.

with Schmidlapp, C. J. The Diagnostic Value of Urinary Sediment: A Review Based on the Papanicolaou Method. N. Y. State J. Med. 50: 56, 1950.

McElwee, Ross S.

with Ray, B. S. The Control of Acute Subdural Hemorrhage by Injection of Saline into the Spinal Subarachnoid Space. J. Neuro. 7: 278, 1950.

McLean, John M.

with Gordon, D. M. Effects of Pituitary Adrenocorticotropic Hormone (ACTH) Therapy in Ophthalmologic Conditions. J. A. M. A. 142: 1271, Apr. 22, 1950.

with Gordon, D. M. and Koteen, H. Clinical Experiences with ACTH and Cortisone in Ocular Diseases. Trans. Amer. Acad. Ophth. and Otol. In press.

with Gordon, D. M. and Koteen, H. The Use of ACTH in Ophthalmology. Proc. Second Clinical ACTH Conf., by The Blakiston Co. In press.

McLellan, Frederick C.

Urologic Section, "Medical Diagnosis" Textbook (Second Edition) by Roscoe Pullen. Published by W. B. Saunders Co., 1950.

Moore, S. W.

Acute Perforation of Peptic Ulcers. Surg. Cl. N. A. 30: 429, April, 1950.

with Glenn, F., Forkner, C. and Almy, T. P. The Treatment of Peptic Ulcer. Rhode Island Med. J., April, 1950.

Resident Training and Specialization in Surgery. Presidential Address for Society of University Surgeons. Surgery 28: 161, 1950.

Polyps of the Large Intestine, Amer. J. Surg. In press.

Nickel, William F., Jr.

with Andrus, DeW. and Gordon, G. Studies on Lysozyme as an Etiologic Agent in Ulcerative Colitis. J. Gastroenterology. In press.

with Andrus, DeW. and Gordon, G. Studies on Several Cholinergic Drugs as Possible Etiologic Agents in Ulcerative Colitis. J. Gastroenterology. In press.

with Lake, Michael and Andrus, W. DeW. Possible Role of Pancreatic Enzymes in the Etiology of Ulcerative Colitis. J. Gastroenterology. In press.

O'Neill, Earl A.

with Person, E. C. Evaluation of Various Operations for Carcinoma of the Right Colon. Comparative Study of 140 Cases. Int'l Abstracts Surg. 90: 320, 1950.

O'Sullivan, Ward D.

with Dotter, C. T. and Payne, Mary Ann. Catheterization of the Portal Vein in Man, Following Portacaval Anastomosis. Ann. Surg. 132: 310, 1950.

Hepatoma in a Five-Year Old Child Treated by Excision. Am. J. Surg. In press.

with Child, C. G., III. Ileocecal Intussusception Caused by Lymphoid Hyperplasia. J. Pediatrics. In press.

with Glenn, F. Coarctation of the Aorta. N. Y. State J. Med. In press.

Pearce, John M.

Cardiac Lesions Produced by Viruses. The Pathogenesis and Pathology of Viral Diseases. Columbia University Press, N. Y., 1950.

Person, E. Cooper

Congenital Hypertrophic Pyloric Stenosis. Surg. Cl. N. A. 30: 529, April, 1950.

with O'Neill, E. A. Evaluation of Various Operations for Carcinoma of the Right Colon. Comparative Study of 140 Cases. Int'l Abstracts Surg. 90: 320, 1950.

Ray, Bronson S.

with Console, A. D. Bodily Adjustments in Man During Stress in the Absence of Most Visceral Afferents and Sympathetic Nervous System Regulation. Assn. for Research in Nervous and Mental Diseases. Vol. XXIX, Chapter VII. The Williams and Wilkins Co., Balto., Md., 1950.

with Console, A. D. and Dunbar, H. S. Pheochromocytoma: The Use of an Adrenolytic Agent in the Operative Management. Surgery 28: 428, 1950.

with McElwee, R. S. The Control of Acute Subdural Hemorrhage by Injection of Saline into the Spinal Subarachnoid Space. J. Neuro. 7: 278, 1950.

with Dunbar, H. S. Thrombosis of the Superior Sagittal Sinus as a Cause of Pseudo Tumor Cerebri: Methods of Diagnosis and Treatment. Trans. Amer. Neurological Assn., 1950.

with Dunbar, H. S. and Dotter, C. T. Dural Sinus Venography. Radiology. In press.

with Dunbar, H. S. and Dotter, C. T. Dural Sinus Venography as an Aid to Diagnosis in Intracranial Disease. J. Neuro. In press.

Ruptured Lumbar Disks. Discussion of Industrial Accidents and Diseases. Bull. No. 105, U. S. Dept. of Labor, Bureau of Standards, p. 116, 1950.

Surgery of the Autonomic Nervous System: Indications and Results. N. Y. State J. Med. 50: 1810, 1950.

Lesions Simulating Disk Protrusion. Amer. Acad. Ortho. Surgeons. Lectures. Vol. VII, Chapter XIV. J. W. Edwards. Ann Arbor, Mich., 1950.

Management of Head Injuries. Amer. Acad. Ortho. Surgeons. Lectures. Vol. VII, Chapter XV. J. W. Edwards. Ann Arbor, Mich., 1950.

The Present Status of the Surgical Treatment of Hypertension. Phila. Med. 45: 937, 1950.

The Surgical Treatment of Angina Pectoris. Nelson Loose Leaf Medicine. Thomas Nelson & Co. In press.

Schmidlapp, Carl J., 2nd

with Marshall, V. F. The Diagnostic Value of Urinary Sediment: A Review based on the Papanicolaou Method. N. Y. State J. Med. 50: 56, 1950.

Stark, Richard B.

Experimental Observations on the Lymphocytic Response after Homoplastic Skin Grafts and on the Negative Role of the Reticuloendothelial System in the Failure of Homoplastic Skin Grafts. Plastic and Reconstr. Surg. In press.

with Conway, H., Weeter, J. C., Garcia, F. A. and Kavanaugh, D. Complications of Decubitus Ulcers in Patients with Paraplegia. Plastic and Reconstr. Surg. In press.

Twinem, Francis P.

with Langdon, B. The Surgical Management of Bladder Stone. J. Urol. In press.

with Beneventi, F. A. Transection of Ureter Following Uterine Instrumentation. J. Urol. 63: 224, 1950.

Wade, Preston A.

Fractures of the Shafts of Both Bones of the Lower Leg. Surg. Cl. N. A. In press.

West, John P.

with Schetlin, C. F. Acute Mechanical Obstruction of the Small Intestine. Am. J. Surg. 89: 432, 1950.

with Knox, G. Vagus Section in the Treatment of Gastrojejunal Ulcer. Ann. Surg. In press.

Whitmore, Willet F., Jr.

with Marshall, V. F. Simple Cystectomy for Cancer of the Urinary Bladder. 100 Consecutive Cases: Two Years Later. J. Urol. 63: 232, 1950.

with Foot, N. C. and Humphreys, G. A. Renal Tumors. Pathology and Prognosis in 295 Cases. J. Urol. In press.

with Marshall, V. F., Petro, A. T., Poppell, J. W., Grant, R. N. and Rawson, R. W. Osteitis Pubis Treated with Adrenocorticotropic Hormone. J. Urol. In press.

CLASSIFICATION OF OPERATIONS

(PAVILION)

Department of Surgery

GRAFTS:

Preparation of pedicle or tube graft	19
Cutting of pedicle or tube graft	8
Application of pinch grafts	27
Application of thin split thickness graft	64
Application of intermediate split graft	16
Cartilage graft	1
Fascial graft	1
Fat graft	1
	137

SUBCUTANEOUS TISSUE:

Incision and drainage of subcutaneous abscess	62
Local excision of lesion of subcutaneous tissue	213
Wide excision of lesion of subcutaneous space	14
Excision of pilonidal sinus	30
Secondary closure of wound	31
Exploration of wound	21
	371

ABDOMINAL WALL:

Exploratory celiotomy	41
Incision and drainage of intra-abdominal abscess	7
Abdominal paracentesis	2
Secondary suture of wound of abdominal wall	14
Biopsy of peritoneum	4
Hernia, inguinal	227
femoral	14
ventral	39
epigastric	7
umbilical	25
ischiatic	1
diaphragmatic	9
	390

SKIN:

Incision and drainage of lesions of skin	5
Excision of lesion of skin	59
Plastic repair of skin without graft	14
Z plastic on skin	34
Biopsy of lesion of skin	14
Debridement of burn of skin	5
	131

BREAST:

Mastotomy	7
Local excision of lesion of breast	132
Simple mastectomy	4
Radical mastectomy	60
Biopsy of breast	51
Mastoplasty	6
	260

BONES:

Drainage of bone	6
Removal of foreign body from bone	10
Osteotomy	11
Local excision of lesion of bone	13
Partial ostectomy	23
Complete ostectomy	4
Insertion of traction device	10
Osteoplasty	1
Bone graft	3
Open reduction of fracture	36
Closed reduction of fracture	9
Fusion of bone	2
Spine fusion	9
Biopsy of bone lesion of sternal marrow	14
Epiphyseodesis	3
	154

JOINTS, SYNOVIA AND CARTILAGE:

Arthrotomy	8
Arthrectomy	1
Arthroplasty	3
Arthrodesis	16
Capsulotomy	2
Excision of intervertebral disk	27
Excision of semilunar cartilage of knee	10
Ganglionectomy	8
Manipulation of joint	4
Open reduction of dislocation	6
Closed reduction of dislocation	7
	92

BURSA:

Incision and drainage of bursa	1
Incision and removal of calcareous deposit	4
Excision of bursa	7
	12

Muscles:

Myectomy	12
Local excision of lesion of muscle	5
Myoplasty	2
Myorrhaphy	1
Scalenotomy	2
Myotomy	1
	23

Tendons:

Exploration of tendon or tendon sheath	5
Incision and drainage of tendon sheath	1
Tenotomy	3
Excision of lesion of tendon	8
Tenosynovectomy	2
Tenoplasty	7
Transposition of tendon	1
Tenorrhaphy	9
	36

Fascia:

Exploration of fascia	1
Fasciotomy	1
Excision of fascia	2
	4

Extremities:

Incision and drainage of hand or fingers	5
Amputation of finger	4
Amputation of leg	10
Amputation of foot	2
Amputation of toe	19
Incision and drainage of infection of foot	1
	41

Nose:

Excision of lesion of nose	3
Septectomy	81
Turbinectomy	3
Biopsy of nose	2
Rhinoplasty	46
Reduction of fracture of nose	5
	140

Sinuses:

Sinusotomy, simple	12
radical	16
Excision of lesion of accessory sinus	26
	54

Larynx, Trachea, Bronchus, Pharynx:

Total laryngectomy	3
Partial laryngectomy	1
Biopsy of larynx	1
Tracheotomy	9
Bronchoscopy	1
	15

Tonsils and Adenoids:

Tonsillectomy	618
Adenoidectomy	48
	666

Thorax:

Thoracotomy with exploration	16
Thoracotomy with open drainage	2
Thoracentesis	1
Thoracoplasty	18
	37

Lungs:

Pneumonotomy with drainage	2
Pneumonotomy with local excision of lesion	2
Total pneumonectomy	12
Total lobectomy	11
Pleurectomy	1
Pneumonolysis	1
	29

Mediastinum:

Mediastinotomy	1
Mediastinotomy with removal of lesion	3
	4

Heart:

Pericardectomy	1
Auricular amputation	1
Valvulotomy	1
	3

Arteries:

Arteriotomy	4
Arteriography	48
Ligation of arteries	8
Ligation of patent ductus arteriosus	13
Arterial anastomosis	6
	79

Veins:

Phlebectomy	196
Venography	29
Venous anastomosis	5
Ligation of veins	1
Ligation of femoral veins	13
Operation for arteriovenous fistula	1
	245

Spleen, Lymphatics:

Splenectomy	10
Excision of lesion of lymphatics	1
Incision and drainage of lymph nodes	1
Local excision of lymph nodes	12
Radical excision of lymph nodes	5
Biopsy of lymph nodes	44
Implantation of radon seeds in lymph nodes of neck	1
	74

Oral Cavity:

Incision and drainage of abscess of mouth or lip	2
Excision of lesion of mouth or lip	10
Biopsy of mouth or lip	8
Stomatoplasty	4
Cheiloplasty	4
Suture of lip	1
Local excision of lesion of tongue	1
Partial glossectomy	1
Glossoplasty	2
Palatoplasty	15
Sialolithotomy	1
Excision of salivary gland	8
Repair of harelip	5
Repair of cleft palate	5
Repair of rhino-oral fistula	9
	76

Esophagus:

Esophagectomy	2
Esophagogastrectomy	4
Esophagogastrostomy	3
Closure of tracheoesophageal fistula	1
	10

Stomach:

Gastrotomy	7
Pyloromyotomy	11
Local excision of lesion of stomach	3
Partial gastrectomy	122
Total gastrectomy	10
Gastrostomy	4
Gastrorrhaphy	5
Gastroenterostomy	6
	168

Small Intestine:

Enterotomy	2
Local excision of lesion	3
Resection	8
Enterostomy	8
Enteroenterostomy	5
Enterorrhaphy	8
Lysis of adhesions for small bowel obstruction	9
Reduction of intussusception	1
Reduction of volvulus	1
	45

Appendix:

Appendectomy, chronic or incidental	35
acute	254
with drainage	33
Incision and drainage of appendiceal abscess	2
	324

Colon:

Colostomy	33
Closure of colostomy	22
Colotomy	2
Local excision of lesion of colon	19
Right colectomy	12
Transverse colectomy	7
Descending or sigmoid colectomy	39
Total colectomy	2
Lysis of adhesions for obstruction of colon	2
	138

Rectum:

Abdominoperineal resection of sigmoid and rectum	29
Proctosigmoidostomy	1
Closure of rectal fistula	4
Pelvic eviscerotomy	2
	36

Anus:

Fistulectomy	18
Incision and drainage of perianal abscess	32
Excision of lesion of anus and rectum	23
Hemorrhoidectomy	73
Anoplasty	2
Dilation of anal sphincters	15
Proctoscopy	1
	164

Liver, Biliary Tract, Pancreas:

Hepatotomy with exploration	1
Biopsy of liver	10
Local excision of lesion of liver	1

Liver, Biliary Tract, Pancreas—*Continued*

Cholecystectomy, chronic	194
acute	40
Cholecystectomy and choledochotomy	16
Cholecystostomy	8
Cholecystenterostomy	5
Biopsy of gallbladder	1
Choledochotomy	16
Choledochoplasty	4
Choledochoenterostomy	1
Choledochostomy	4
Closure of biliary fistula	2
Biopsy of pancreas	2
Radical pancreaticoduodenectomy	4
	309

Kidney and Renal Pelvis:

Incision and drainage of kidney	2
Nephrectomy	37
Biopsy of kidney	1
Nephropexy	1
Incision and drainage of perirenal tissues	4
Nephrostomy	13
Pyeloplasty	3
Pyelotomy	4
	65

Ureter:

Ureterotomy	16
Ureteroplasty	6
Ureterocystostomy	2
Ureterosigmoidostomy	1
Ureterostomy	8
Closure of ureteral fistula	1
	34

Bladder and Urethra:

Cystotomy and cystostomy	11
Local excision of lesion of bladder	37
Partial cystectomy	2
Total cystectomy	2
Biopsy of bladder	4
Cystoscopy	2
Cystoplasty and cystopexy	4
Cystorrhaphy	1
Operation for bladder fistula	2
Operations on urethra	8
Pelvic evisceration	9
	82

Male Genital System:

Penis:

Circumcision	20
Excision of lesion	2
Amputation	1
Biopsy	3
Plastic	7
	33

Male Genital System—*Continued*

Testis:

Orchiectomy	22
Biopsy	1
Orchiopexy	21
	44

Epididymis:

Excision of lesion	1
Epididymectomy	3
Epididymovasostomy	2
	6

Scrotum:

Incision and drainage of abscess	3
Local excision of lesion	7
Plastic	2
Vasectomy	90
Excision of hydrocele	24
Excision of varicocele	1
	127

Prostate:

Incision and drainage of abscess	2
Suprapubic prostatectomy	24
Perineal prostatectomy	15
Radical perineal prostatectomy	4
Transurethral electroresection	164
Retropubic prostatectomy	2
Biopsy	1
	212
Total Male Genital System	422

Female Genital System:

Operations on vulva	2
Plastic repair of perineum	1
Salpingectomy	5
Oophorectomy	6
Pan hysterectomy	1
	15

Endocrine:

Thyroidotomy	3
Thyroidectomy, non-toxic	121
toxic	45
total	5
Reopening thyroid wound for hemorrhage	2
Exploration of endocrine gland	2
Parathyroidectomy	1
Hypophysectomy	1
Adrenalectomy	1
Operation for thyroglossal duct	1
	182

SKULL, BRAIN, MENINGES:

Craniotomy, exploratory	19
Decompression	10
Craniectomy	2
Biopsy of skull	3
Excision of tumor of skull	7
Cranioplasty	4
Open reduction of fracture of skull	1
Drainage of meninges	2
Excision of lesion of meninges	8
Encephalography	10
Ligation of meningeal vessels	1
Exploration of brain and biopsy	10
Incision and drainage of brain abscess	2
Lobotomy	16
Local excision of lesion of brain	19
Ventriculography	75
Ventriculostomy	4
	193

SPINAL CORD:

Laminectomy, exploratory	9
Chordotomy	1
Rhizotomy	3
Excision of lesion	4
Injection of alcohol, intrathecal	1
	18

NERVES:

Exploration of nerve	2
Neurotomy	1
Retrogasserian neurotomy	10
Acoustic neurotomy	2
Vagotomy	1
Phrenic nerve interruption	4
Excision of lesion	5
Neurectomy	5
Ganglionectomy	1
Neuroplasty	2
Anastomosis of nerves	1
Neurotripsy	2
Sympathectomy for hypertension	35
other than for hypertension	12
	83

EYE:

Intrascapular cataract extraction	138
Muscle operation	82
Iridencleisis	16
Discission	15
Excision of lesion of eyelid	15
Keratocentesis	14
Cornea-scleral trephine	12
Cyclodialysis	11
Extrascapular cataract extraction	11
Enucleation	8
Reattachment of retina	7
Blepharoplasty	6
Lid incision and drainage	4
Repair of prolapsed iris	3
Coreoplasty	3
Keratectomy, partial	2
Keratoplasty	2
Posterior sclerotomy	2
Secondary repair of sclera	2
Resection of levator palpebrae superioris muscle	2
Exploration of orbit	2
Implant of polyethene	2
Conjunctival flap	2
Dacryocystorhinostomy	2
Secondary implant	1
Corneal tattoo	1
Capsulotomy	1
Capsulectomy	1
Removal of foreign body, intraorbital	1
Excison of tumor of orbit	1
Ptosis operation with fascia lata sling	1
Excision subconjunctival tumor	1
Conjunctivoplasty	1
Dilatation and curettage of canaliculis	1
Canaliculorhinostomy	1
Dacryocystectomy	1
Excision of cyst	1
	376

EAR:

Excision of aural polyp	2
Excision of local lesion	1
Bilateral otoplasty	13
Mastoidectomy, simple	6
endaural	11
Fenestration	11
	44

DENTAL:

Excision retained root	3
Multiple extractions with curettage of alveolar ridge	3
	6

TOTAL PAVILION OPERATIONS	5,787

CLASSIFICATION OF OPERATIONS

(PRIVATE)

Department of Surgery

Grafts:

Preparation of pedicle or tube graft	9
Cutting of pedicle or tube graft	13
Application of pinch graft	5
Application of thin split thickness graft	21
Application of intermediate split graft	7
Cartilage graft	2
	57

Subcutaneous Tissue:

Incision and drainage of subcutaneous abscess	22
Local excision of lesion of subcutaneous tissue	115
Wide excision of lesion of subcutaneous tissue	7
Excision of pilonidal sinus	23
Secondary closure of wound	8
Exploration of wound	7
	182

Abdominal Wall:

Exploratory celiotomy	24
Incision and drainage of intra-abdominal abscess	13
Omentectomy	1
Secondary suture of wound of abdominal wall	2
Omentopexy	2
Removal of foreign body from peritoneal cavity	2
Hernia, inguinal	204
femoral	3
ventral	21
epigastric	1
umbilical	6
diaphragmatic	4
	283

Skin:

Incision and drainage of lesions of skin	5
Excision of lesion of skin	33
Plastic repair of skin without graft	8
Z plastic on skin	18
Biopsy of lesion of skin	3
Debridement of burn of skin	5
Tattoo of lesion of skin	2
	74

Breast:

Mastotomy	2
Local excision of lesion of breast	105
Simple mastectomy	6
Radical mastectomy	44
Biopsy of breast	3
Mastoplasty	8
	168

Bones:

Exploration of bone	1
Removal of foreign body from bone	15
Osteotomy	9
Local excision of lesion of bone	12
Partial ostectomy	25
Complete ostectomy	8
Insertion of traction device	2
Bone graft	1
Open reduction of fracture	34
Closed reduction of fracture	8
Fusion of bone	1
Spine fusion	10
Biopsy of bone lesion of sternal marrow	7
Operation for non-union of fracture	3
Epiphyseodesis	1
	137

Joints, Synovia and Cartilage:

Arthrotomy	7
Arthrectomy	3
Arthroplasty	1
Arthrodesis	9
Chondrectomy	1
Excision of intervertebral disk	46
Excision of semilunar cartilage of knee	15
Excision of lesion of joint	2
Manipulation of joint	2
Open reduction of dislocation	5
Closed reduction of dislocation	2
Synovectomy	1
	94

Bursa:

Incision and removal of calcareous deposit	7
Excision of bursa	5
	12

Muscles:

Incision and drainage of abscess of muscle	1
Myectomy	2
Local excision of lesion of muscle.	3
Resection of muscle	1
Scalenotomy	3
	10

Tendons:

Exploration of tendon or tendon sheath	3
Incision and drainage of tendon sheath	1
Tenotomy	1
Excision of lesion of tendon	8
Tenosynovectomy	3
Tenoplasty	6
Transposition of tendon	1
Tenorrhaphy	4
	27

Fascia:

Fasciotomy	2
Excision of fascia	2
Fasciorrhaphy	1
	5

Extremities:

Incision and drainage of infection of hand	2
Incision and drainage of infection of finger	6
Amputation of finger	6
Amputation of arm	1
Amputation of leg	3
Amputation of toe	2
Incision and drainage of infection of foot	5
	25

Nose:

Excision of lesion of nose	3
Septectomy	98
Turbinectomy	14
Biopsy of nose	1
Rhinoplasty	55
Reduction of fracture of nose	2
	173

Sinuses:

Sinusotomy, simple	14
radical	21
Excision of lesion of accessory sinus	24
Closure of fistula of maxillary sinus	1
	60

Larynx, Trachea, Bronchus, Pharynx:

Local excision of lesion of larynx.	12
Partial laryngectomy	2
Laryngoscopy	10
Tracheotomy	2
Bronchoscopy	1
	27

Tonsils and Adenoids:

Tonsillectomy	417
Adenoidectomy	15
	432

Thorax:

Thoracotomy with exploration	21
Thoracotomy with open drainage.	2
Thoracoscopy	1
Thoracoplasty	5
	29

Lungs:

Pneumonotomy with exploration.	1
Pneumonotomy with local excision of lesion	5
Total pneumonectomy	16
Total lobectomy	3
Partial lobectomy	6
	31

Mediastinum:

Mediastinotomy	1

Heart:

Valvulotomy	3

Arteries:

Arteriectomy	2
Arteriography	24
Arterial anastomosis	2
Aneurysmorrhaphy	2
Ligation of patent ductus arteriosus	1
	31

Veins:

Phlebectomy	108
Venography	2
Venous anastomosis	2
Ligation of veins	2
Operation for arteriovenous fistula	4
	118

Spleen, Lymphatics:

Splenectomy	4
Incision and drainage of abscess of lymph nodes	1
Local excision of lymph nodes	16
Radical excision of lymph nodes	4
Biopsy of lymph nodes	16
	41

CLASSIFICATION OF OPERATIONS (PRIVATE)—*Continued*

ORAL CAVITY:

Incision and drainage of abscess of mouth or lip	3
Excision of lesion of mouth or lip	7
Biopsy of mouth or lip	2
Stomatoplasty	2
Cheiloplasty	4
Suture of lip	1
Local excision of lesion of tongue	1
Palatoplasty	6
Incision and drainage of salivary gland	1
Repair of harelip	6
Repair of cleft palate	2
Repair of rhino-oral fistula	5
Local excision of lesion of dental ridges	1
Sialolithotomy	2
Excision of salivary gland	3
	46

ESOPHAGUS:

Esophagoscopy	1
Esophagectomy	2
Esophagogastrectomy	1
Esophagogastrostomy	2
	6

STOMACH:

Gastrotomy	2
Pyloromyotomy	3
Local excision of lesion of stomach	1
Partial gastrectomy	92
Total gastrectomy	4
Biopsy of stomach	2
Gastrostomy	2
Operation for gastroenteric fistula	1
Gastrorrhaphy	3
Gastroenterostomy	4
	114

SMALL INTESTINE:

Enterotomy	1
Resection	6
Biopsy of intestine	1
Enteroenterostomy	5
Lysis of adhesions for small bowel obstruction	11
	24

APPENDIX:

Appendectomy, chronic or incidental	45
acute	60
with drainage	3
Incision and drainage of appendiceal abscess	1
	109

COLON:

Colostomy	16
Closure of colostomy	8
Colotomy	1
Local excision of lesion of colon	15
Right colectomy	17
Transverse colectomy	3
Descending or sigmoid colectomy	41
Total colectomy	1
Lysis of adhesions for obstruction of colon	6
	108

RECTUM:

Abdominoperineal resection of sigmoid and rectum	19
Perineal resection	3
Proctosigmoidoscopy	1
Closure of rectal fistula	1
	24

ANUS:

Fistulectomy	18
Incision and drainage of perianal abscess	11
Excision of lesion of anus and rectum	32
Hemorrhoidectomy	96
Dilation of anal sphincters	3
Proctoscopy	2
	162

LIVER, BILIARY TRACT, PANCREAS:

Hepatotomy with drainage	1
Biopsy of liver	8
Cholecystectomy, chronic	150
acute	15
Cholecystectomy and choledochotomy	2
Cholecystostomy	2
Cholecystenterostomy	2
Choledochotomy	2
Choledochoenterostomy	1
Choledochostomy	2
Biopsy of pancreas	1
Partial pancreatectomy	1
Total pancreatectomy	2
Transplantation of pancreatic duct	1
	190

KIDNEY AND RENAL PELVIS:

Incision and drainage of kidney	4
Nephrectomy	30
Nephropexy	1
Incision and drainage of perirenal tissues	2
Nephrostomy	5
Pyeloplasty	5
Pyelotomy	17
	64

URETER:

Ureterotomy	9
Ureterectomy	3
Ureteroplasty	3
Ureterocystostomy	1
Ureterosigmoidostomy	7
Ureterostomy	2
	25

BLADDER AND URETHRA:

Cystotomy and Cystostomy	11
Local excision of lesion of bladder	48
Partial cystectomy	5
Total cystectomy	6
Biopsy of bladder	5
Cystoscopy	2
Cystoplasty and cystopexy	5
Operation for bladder fistula	1
Operations on urethra	13
Pelvic evisceration	4
Implantation of radon seeds in bladder	2
Removal of Pilcher bag for control of hemorrhage	1
	103

MALE GENITAL SYSTEM:

PENIS:

Circumcision	27
Excision of lesion of penis	2
Plastic	7
Irrigation of corpora cavernosa	1
	37

TESTIS:

Orchiectomy	16
Biopsy of testis	23
Orchiopexy	6
	45

EPIDIDYMIS:

Epididymectomy	3
Epididymovasostomy	2
	5

SCROTUM:

Incision and drainage of abscess	1
Local excision of lesion of scrotum	5
Plastic	3
Vasectomy	5
Excision of hydrocele	15
Excision of varicocele	2
	31

MALE GENITAL SYSTEM—*Continued*

PROSTATE:

Suprapubic prostatectomy	45
Perineal prostatectomy	4
Radical perineal prostatectomy	3
Transurethral electroresection	129
Retropubic prostatectomy	4
Biopsy of prostate	1
	186
TOTAL MALE GENITAL SYSTEM	304

FEMALE GENITAL SYSTEM:

Operation on vulva	1
Plastic repair of perineum	1
Colpoperineorrhaphy	6
Salpingectomy	5
Oophorectomy	8
Supracervical hysterectomy	66
Total hysterectomy	12
Pan hysterectomy	1
Vaginal hysterectomy	5
Dilatation and curettage	28
Trachelectomy	2
Tracheoplasty	1
Biopsy of cervix	1
	137

ENDOCRINE:

Thyroidotomy	1
Thyroidectomy, non-toxic	64
toxic	25
total	1
Parathyroidectomy	2
Thymectomy	1
	94

SKULL, BRAIN, MENINGES:

Craniotomy, exploratory	7
Decompression	5
Biopsy of skull	1
Excision of tumor of skull	2
Cranioplasty	2
Open reduction of fracture of skull	3
Excision of lesion of meninges	5
Encephalography	9
Exploration of brain and biopsy	7
Incision and drainage of brain abscess	2
Lobotomy	4
Local excision of lesion of brain	15
Resection of lobe of brain	1
Ventriculography	41
Ventriculostomy	3
	107

SPINAL CORD:

Laminectomy, exploratory	11
Exploration and biopsy	1
Rhizotomy	4
Decompression	1
Injection of alcohol, intrathecal	4
Myelogram	1
	22

NERVES:

Exploration of nerve	5
Neurotomy	2
Retrogasserian neurotomy	6
Acoustic neurotomy	1
Phrenic nerve interruption	2
Excision of lesion of nerve	7
Neurectomy	2
Ganglionectomy	4
Injection of nerve	1
Neuroplasty	2
Neurolysis	1
Sympathectomy for hypertension	28
Sympathectomy other than for hypertension	9
	70

EYE:

Intracapsular cataract extraction	71
Muscle operation	61
Reattachment of retina	21
Enucleation	11
Iridencleisis	11
Extracapsular cataract extraction	10
Discission	6
Cornea-scleral trephine	4

EYE—*Continued*

Excision of lesion of eyelid	3
Keratocentesis	3
Iridectomy	3
Keratoplasty	2
Conjunctival flap	2
Dacryocystorhinostomy	2
Excision of tumor of orbit	2
Conjunctivoplasty	2
Iridotomy	2
Blepharoplasty	1
Repair of prolapsed iris	1
Posterior sclerotomy	1
Resection of levator palpebrae superioris muscle	1
Secondary implant	1
Corneal tattoo	1
Capsulectomy	1
Excision subconjunctival tumor	1
Excision of cyst	1
Suture of cornea	1
Cyclodialysis	1
Excision of iris prolapse and repair of cornea-scleral wound	1
	228

EAR:

Excision of local lesion	2
Otoplasty	10
Mastoidectomy, simple	2
endaural	1
Fenestration	8
	23

TOTAL PRIVATE OPERATIONS	3,980

TABLE I.

OPERATIVE DEATHS, GENERAL SURGERY (PAVILION)

EMERGENCY: 10

Number	*Age*	*Primary Diagnosis*	*Operation*	*Cause of Death*	*Autopsy*
565879	3 weeks	Malrotation of colon. Atresia of small intestine	Exploratory laparotomy. Resection of jejunum and ileoduodenostomy	Intestinal obstruction	Yes
565454	56	Calcific constrictive pericarditis. Latent syphilis	Pericardectomy. Secondary closure of non-union of surgical fracture of sternum. Emergency thoracotomy for cardiac arrest	Cerebral anoxia	No
553397	45	Saddle embolus of aorta. Rheumatic heart disease with enlarged heart and auricular fibrillation. Chronic nephritis	Embolectomy	Rheumatic heart disease with fibrillation and decompensation	Yes
575004	70	Perforation of duodenal ulcer. Probable metastatic carcinoma of lungs	Plication of perforated duodenal ulcer. Plication of reperforation of duodenal ulcer. Bilateral superficial femoral vein ligation	Metastatic melanoma of lungs. Primary site unknown	Yes
575089	64	Thrombosis superior mesenteric artery. Rheumatic heart disease with auricular fibrillation	Resection of small bowel, jejunoileostomy. Resection of remaining ileum, jejunocecostomy, cecostomy	Cerebral vascular thrombosis	No
66219	53	Acute cholecystitis. Diabetes mellitus. Coronary occlusion. Embolism to femoral artery	Cholecystectomy. Embolectomy, left femoral artery	Coronary occlusion. Gangrene of left leg due to embolism to femoral artery	No
137524	68	Intertrochanteric fracture, left femur. Diabetes mellitus	Open reduction of intertrochanteric fracture, left femur	Uremia. Gas bacillus infection	Medical examiner
582147	5 days	Atresia of esophagus, complete	Exploratory thoracotomy. Jejunostomy	Atelectasis bilateral. Aspiration pneumonia	Yes
581779	65	Perforated duodenal ulcer	Plication of perforated duodenal ulcer	Cerebral thrombosis	No
586998	35	Saddle embolus of aorta. Rheumatic heart disease	Aortic embolectomy. Lumbar sympathectomy	Rheumatic heart disease	No

TABLE I.—*Continued*

OPERATIVE DEATHS, GENERAL SURGERY (PAVILION)—*Continued*

CANCER: 19

Number	*Age*	*Primary Diagnosis*	*Operation*	*Cause of Death*	*Autopsy*
530284	48	Carcinoma of sigmoid colon	Transverse colostomy	Carcinomatosis	Yes
553998	71	Carcinoma of rectum with metastases to liver	Exploratory laparotomy. Biopsy of liver. Loop sigmoidostomy	Carcinomatosis	Yes
560218	69	Carcinoma of pancreas	Exploratory laparotomy. Biopsy of liver	Carcinomatosis	Yes
297101	80	Bilateral cataracts. Adenocarcinoma of recto-sigmoid	Intranuclear cataract extraction. Resection of sigmoid. Transverse colostomy	Coronary occlusion	Yes
103096	67	Carcinoma of ascending colon with metastases to liver and lungs	Exploratory laparotomy. Ileotransverse colostomy. Biopsy of liver	Carcinomatosis	No
297697	71	Carcinoma of lung. Arteriosclerotic heart disease	Pneumonectomy	Carcinomatosis	No
57284	77	Carcinoma of stomach with extensive intra-abdominal metastases	Biopsy of peritoneum. Transverse colostomy	Carcinomatosis	Yes
223826	67	Carcinoma of stomach. Subacute combined sclerosis. Pernicious anemia	Total gastrectomy. Incision and drainage of subphrenic abscess	Subphrenic abscess. Generalized peritonitis	No
578103	57	Carcinoma of common bile duct	Radical pancreaticoduodenectomy	Shock due to postoperative hemorrhage	Yes
565513	43	Carcinoma of breast	Radical mastectomy	Carcinomatosis	No
555844	37	Carcinoma, pyriform sinus. Laennec's cirrhosis	Tracheotomy	Carcinomatosis	Yes
578893	66	Carcinoma of Ampulla Vater	Radical pancreaticoduodenectomy	Lower nephron nephrosis	Yes
583956	68	Carcinoma of esophagus	Resection of esophagus and esophagogastrostomy	Cerebral arterial thrombosis	Yes
258781	93	Benign prostatic hypertrophy. Carcinoma of hepatic duct	Cholecystectomy	Uremia	Yes
582010	80	Carcinoma of recto-sigmoid. Carcinoma of esophagus	Colostomy	Carcinomatosis	No

TABLE I.—*Continued*

OPERATIVE DEATHS, GENERAL SURGERY (PAVILION)—*Continued*

CANCER: 19—*Continued*

Number	*Age*	*Primary Diagnosis*	*Operation*	*Cause of Death*	*Autopsy*
582076	27	Carcinoma of stomach	Exploratory laparotomy. Biopsy of stomach	Carcinomatosis	Yes
585683	58	Carcinoma of lung	Pneumonectomy	Cardiac arrest	Medical examiner
578516	54	Carcinoma of pancreas	Partial resection of pancreas. Gastrojejunostomy. Choledochojejunostomy	Carcinomatosis	Yes
554631	67	Carcinoma of recto-sigmoid	Sigmoid colectomy	Lower nephron nephrosis. Uremia	No
BILIARY TRACT: 3					
573261	81	Laennec's cirrhosis. Hypertensive cardiac vascular disease	Choledochotomy. Cholecystoenterostomy	Cirrhosis of liver. Cholemia	Yes
584714	2 months	Obstructive jaundice, congenital	Exploratory laparotomy	Obstructive jaundice	Yes
566682	67	Amyloidosis. Cholelithiasis	Cholecystectomy	Amyloidosis	Yes
GASTROINTESTINAL: 9					
533364	33	Acute fulminating ulcerative colitis	Ileostomy	Acute generalized peritonitis	Yes
550265	21 months	Megacolon	Transverse colostomy	Bronchopneumonia	Yes
206450	46	Massive hemorrhage from chronic duodenal ulcer	Partial gastrectomy	Pulmonary atelectasis. Aspiration of vomitus, postoperative	Yes
587099	73	Leiomyoma of stomach	Gastric resection	Air embolism	Yes
413020	90	Marginal ulcer with bleeding and obstruction	Jejunostomy	Infarction of ileum and jejunum due to volvulus	Yes
571306	61	Gastric ulcer	Partial gastrectomy	Coronary occlusion	No
573777	59	Ulcerative colitis	Ileostomy	Cerebral accident	Yes

TABLE I.—*Continued*

OPERATIVE DEATHS, GENERAL SURGERY (PAVILION)—*Continued*

GASTROINTESTINAL: 9—*Continued*

Number	*Age*	*Primary Diagnosis*	*Operation*	*Cause of Death*	*Autopsy*
439696	68	Duodenal ulcer with obstruction	Partial gastrectomy. Exploratory laparotomy with drainage of duodenal stump. Incision and drainage of subphrenic abscess	Pulmonary infarct. Peritonitis	Yes
569747	62	Gastrointestinal hemorrhage. Aneurysm abdominal aorta	Exploratory laparotomy with gastrotomy. Exploratory laparotomy with secondary closure of wound	Peritonitis	Yes
MISCELLANEOUS: 7					
424038	61	Arteriosclerosis, generalized. Osteomyelitis of foot	Amputation of second and third toes of right foot	Coronary occlusion	Yes
83807	65	Arteriosclerosis obliterans with gangrene of toes. Generalized arteriosclerosis	Lumbar sympathectomy	Pulmonary infarction. Thrombosis of iliac veins	No
572746	1 week	Diaphragmatic hernia	Phrenic crush and hernioplasty	Atelectasis	Yes
387448	78	Arteriosclerotic heart disease with failure. Generalized arteriosclerosis. Gangrene of foot	Transmetatarsal amputation. Neurotripsy. Pinch graft to foot. Split thickness graft to foot	Coronary occlusion	No
489798	3	Congenital heart disease. Pulmonary stenosis	Anastomosis internal mammary to pulmonary artery	Congenital heart disease	No
579932	2	Congenital pulmonary valvular stenosis	Pulmonary valvulotomy	Pulmonary valvular stenosis	Yes
565493	57	Aneurysm of right iliac artery. Varicose veins, right leg	Phlebectomy	Hemorrhage from spontaneous rupture of aneurysm of iliac artery	No

TABLE II.

OPERATIVE DEATHS, SURGICAL SPECIALTIES (PAVILION)

Neurosurgery: 21

Number	*Age*	*Primary Diagnosis*	*Operation*	*Cause of Death*	*Autopsy*
552734	56	Transverse myelitis	1. Hemilaminectomy. 2. Laminectomy	Transverse myelitis	No
561099	43	Brain tumor	Sagittal intracranial venogram. Parietal burr holes	Brain tumor	Medical examiner
563460	45	Brain tumor	Craniotomy	Brain tumor	No
562094	54	Intractable pain secondary to carcinoma of parotid gland	Cervical rhizotomy	Hemorrhage about brain stem	Yes
563902	58	Brain tumor	Craniotomy. Re-elevation of left flap with evacuation of hematoma	Brain tumor	Yes
78301	63	Brain tumor	Craniotomy	Brain tumor	Medical examiner
560283	34	Carcinoma of breast. Pulmonary metastases	1. Lobotomy. 2. Hemilaminectomy	Carcinomatosis	No
566065	30	Subarachnoid hemorrhage. Ruptured intracranial aneurysm	Carotid arteriogram	Subarachnoid hemorrhage	Yes
429292	43	Recurrent brain tumor with abscesses	Sagittal venogram	Extension of abscess into ventricle	Yes
560903	43	Brain tumor	Ventriculogram	Brain tumor	Yes
498975	60	Psychosis	1. Lobotomy. 2. Re-elevation of bone buttons	Pulmonary embolus	No
569332	53	Intramedullary spinal cord tumor	Laminectomy with biopsy	Pulmonary embolism	No
554766	65	Carcinoma of prostate, inoperable. Intractable pain	Bilateral upper thoracic chordotomy	Carcinomatosis	No
574483	58	Brain tumor	Arteriogram. Craniotomy with biopsy of tumor. Decompression. Emergency removal of plate	Multiple brain tumors	Yes
573599	49	Malignant hypertension. Asymptomatic syphilis	Thoracolumbar sympathectomy, left. Upper thoracic sympathectomy	Coronary occlusion	Yes
429281	60	Carcinoma of larynx and hypolarynx	Right frontal lobotomy	Carcinomatosis	No

TABLE II.—*Continued*

OPERATIVE DEATHS, SURGICAL SPECIALTIES (PAVILION)—*Continued*

Neurosurgery: 21—*Continued*

Number	*Age*	*Primary Diagnosis*	*Operation*	*Cause of Death*	*Autopsy*
550136	52	Brain tumor	Ventriculogram	Cerebral anoxia during induction of anesthesia	No
582389	27	Papilloma of choroid plexus	Ventriculogram. Craniotomy	Papilloma of choroid plexus	No
587211	26	Lacerations and contusions of brain. Multiple skull fractures	Subtemporal decompression	Lacerations and contusions of brain	Medical examiner
404654	49	Craniopharyngeoma. Mitral stenosis	Ventriculogram. Craniotomy. Tracheotomy	Bronchial obstruction due to aspiration of tube feeding	Yes
504201	45	Brain tumor	Ventriculogram. Craniotomy	Brain tumor	Yes
Urology: 4					
561333	68	Benign prostatic hypertrophy	Transurethral resection of prostate	Bronchial obstruction due to aspiration of gastric contents	Yes
369168	71	Carcinoma of kidney with metastases	Suprapubic cystostomy	Carcinoma of kidney. Uremia. Amyloidosis	Yes
425142	54	Agnogenic myelogenous metaplasia. Splenomegally. Hepatomegally. Non-functioning left kidney. Bilateral renal calculi	Excision of ulcer of lower thigh and application of split thickness graft	Myeloid myeloma	Yes
20313	62	Tuberculosis of kidney. Uremia	Nephrostomy	Uremia	Yes
Plastic: 1					
413326	55	Malignant melanoma of ear	Partial excision of ear and right radical neck dissection	Tracheal compression due to postoperative hemorrhage	No
Orthopedics: 1					
554443	19 months	Dorso-lumbar scoliosis. Arachnodactyly	Spine fusion	Postoperative shock	No

TABLE III.

NONOPERATIVE DEATHS (PAVILION)

Number	Age	Primary Diagnosis	Cause of Death	Autopsy
General Surgery: 6				
368488	60	Carcinoma of stomach	Carcinomatosis	Yes
559050	58	Carcinoma of colon	Carcinomatosis. Cerebral vascular accident	Yes
339735	74	Second and third degree burns	Burns	Medical examiner
570013	48	Gastrointestinal bleeding from esophageal varices. Biliary cirrhosis	Hemorrhage from esophageal varices	Yes
92281	62	Laennec's cirrhosis of liver	Cirrhosis of liver	No
577426	67	Malignant lymphoma	Malignant lymphoma	Yes
Neurosurgery: 1				
516049	52	Brain tumor. Convulsions	Brain tumor	Yes
Urology: 2				
254570	70	Benign prostatic hypertrophy. Pulmonary emphysema. Diabetes mellitus	Cerebral vascular accident	Yes
569312	67	Carcinoma of prostate. Hypertensive cardiovascular disease. Arteriosclerotic heart disease	Cardiovascular accident	Yes
Otolaryngology: 1				
568055	46	Carcinoma of larynx. Ethymoid and maxillary sinusitis	Peripheral vascular collapse following cocaine application	Yes

Total Deaths (Pavilion):			
Operative	75	Autopsies obtained	51—64.5%
Nonoperative	10	Medical examiner cases	6
	—	No autopsy	28
	85		—
			85

TABLE IV.

OPERATIVE DEATHS, GENERAL SURGERY (PRIVATE)

EMERGENCY: 3

Number	Age	Primary Diagnosis	Operation	Cause of Death	Autopsy
549479	61	Carcinoma of esophagus, inoperable. Abscess of neck	Incision and drainage of abscess of neck. Gastrostomy	Carcinomatosis	Yes
446335	80	Dissecting aneurysm of abdominal aorta. Arteriosclerotic and hypertensive cardiovascular disease. Chronic myelogenous leukemia	Cecostomy	Rupture of dissecting aneurysm of abdominal aorta with retroperitoneal hemorrhage	Yes
565336	60	Acute peritonitis secondary to perforated appendix. Bronchitis. Peripheral shock	Exploratory laparotomy and cecostomy	Generalized peritonitis	No

CANCER: 21

Number	Age	Primary Diagnosis	Operation	Cause of Death	Autopsy
559633	62	Carcinoma of sigmoid	Sigmoid resection	Peritonitis	No
554830	37	Carcinoma of colon with extensive metastases	Exploratory laparotomy	Carcinomatosis	No
560265	64	Carcinoma of pancreas. Metastases to liver, omentum and regional lymph nodes	Exploratory laparotomy. Cholecystojejunostomy	Carcinomatosis	No
561524	69	Carcinoma of pancreas with metastases to liver	Exploratory laparotomy. Cholecystojejunostomy	Carcinomatosis. Thromboembolism	Yes
565348	70	Carcinoma of pancreas. Pulmonary metastases	Pneumonectomy	Carcinomatosis	Yes
564865	67	Carcinoma of stomach with extensive metastases	Exploratory laparotomy	Carcinomatosis	No
563515	71	Bronchogenic carcinoma of lung. Arteriosclerotic heart disease	Lobectomy	Anoxia	Yes
566421	64	Carcinoma of stomach. Extension to transverse colon and regional lymph nodes	Subtotal gastrectomy. Transverse colectomy. Lysis of adhesions	Aspiration pneumonia	No

TABLE IV.—*Continued*

OPERATIVE DEATHS, GENERAL SURGERY (PRIVATE)—*Continued*

CANCER: 21—*Continued*

Number	*Age*	*Primary Diagnosis*	*Operation*	*Cause of Death*	*Autopsy*
510052	61	Carcinoma of rectum	Abdominoperineal coloproctectomy. Exploratory laparotomy. Resection of gangrenous small intestine	Cardiac arrest	No
566731	51	Carcinoma of pancreas	Exploratory laparotomy and choledochojejunostomy	Carcinomatosis	No
567508	76	Carcinoma of colon. Arteriosclerotic heart disease	Cecostomy	Bronchopneumonia	No
570833	72	Carcinoma of esophagus	Resection of esophagus, with esophago-jejunostomy	Carcinomatosis	Yes
319204	45	Recurrent carcinoma of breast with metastases to skull, lungs, ribs, skin of chest wall. Abscess of buttock	Incision and drainage of abscess of buttock	Carcinomatosis	Yes
299405	73	Carcinoma of esophagus. Hypertensive and arteriosclerotic heart disease. Bilateral varicose veins	Esophagectomy and gastroesophagogastrostomy	Pulmonary embolism	Yes
574056	54	Carcinoma of stomach	Exploratory laparotomy and biopsy of liver	Carcinomatosis	No
185627	47	Carcinoma of rectum. Inguinal hernia	Herniorrhaphy	Carcinomatosis	No
579598	54	Carcinoma of stomach. Empyema	Drainage of empyema	Carcinomatosis	No
582551	83	Carcinoma of cecum	Hemicolectomy	Coronary occlusion	No
477107	54	Carcinoma of colon	Exploratory laparotomy	Carcinomatosis	No
587668	72	Lymphosarcoma of small bowel. Gastric ulcer	Exploratory laparotomy. Small bowel resection	Massive hemorrhage from gastric ulcer	Yes
564054	46	Lymphosarcoma of mediastinum	Exploratory thoracotomy and biopsy of mediastinal tumor	Hemorrhage from duodenal ulcer	Yes

TABLE IV.—*Continued*

OPERATIVE DEATHS, GENERAL SURGERY (PRIVATE)—*Continued*

Biliary Tract: 3

Number	*Age*	*Primary Diagnosis*	*Operation*	*Cause of Death*	*Autopsy*
567510	47	Diffuse liver necrosis	Exploratory laparotomy. Exploration of common duct	Subacute hepatitis	Yes
566182	43	Chronic cholecystitis, cholelithiasis. Coronary artery disease	Cholecystectomy	Coronary occlusion	No
567889	93	Choledocholithiasis. Arteriosclerotic heart disease. Senility	Choledochotomy with removal of stones	Bronchopneumonia	Yes
Gastrointestinal: 3					
501524	68	Bleeding gastric ulcer. Diaphragmatic hernia. General arteriosclerosis with arteriosclerotic heart disease	Phrenic crush	Hemorrhage from gastric ulcer	Yes
574704	2 days	Intussusception. Congenital heart disease	Exploratory laparotomy	Intussusception. Congenital heart disease	No
584857	25	Acute fulminating ulcerative colitis	Exploratory laparotomy	Pulmonary embolus	Yes
Miscellaneous: 3					
575749	40	Rheumatic heart disease. Mitral stenosis	Thoracotomy, pericardiotomy, cardiac massage	Rheumatic heart disease	No
576923	68	Ventral herniae. Arteriosclerotic heart disease	Ventral hernioplasty	Coronary occlusion	Yes
571401	30	Pulmonary stenosis	Valvulotomy	Operative hemorrhage. Pulmonary stenosis	Yes

TABLE V.

OPERATIVE DEATHS, SURGICAL SPECIALTIES (PRIVATE)

NEUROSURGERY: 13

Number	*Age*	*Primary Diagnosis*	*Operation*	*Cause of Death*	*Autopsy*
559021	50	Brain tumor	Craniotomy	Brain tumor	No
561253	44	Essential hypertension. Acute hemorrhagic pancreatitis	Right thoracolumbar sympathectomy. Left thoracolumbar sympathectomy	Acute myocarditis. Acute hemorrhagic pancreatitis	Yes
564028	53	Brain tumor	Ventriculogram. Decompression with removal of bone plate	Brain tumor	Yes
541672	28	Brain tumor	Excision of brain tumor	Shock	Medical examiner
312766	16	Brain tumor	Craniotomy. Revision of wound, ventricular drainage. Right frontal craniotomy. Third ventriculostomy	Brain tumor	No
575706	10 months	Embryonal adenocarcinoma involving right buttock, sacrum, spinal canal and abdominal cavity	Partial excision of adenocarcinoma	Shock. Cerebral and medullary hypoxia	Yes
569339	62	Right hemiparesis	Craniotomy and biopsy of parietal lobe	Brain tumor	Yes
578390	48	Bronchogenic carcinoma with metastases to brain	Ventriculogram. Craniotomy	Carcinomatosis	Yes
569939	46	Hypertensive cardiovascular disease	Right thoracolumbar sympathectomy. Left thoracolumbar sympathectomy	Uremia	Yes
551235	61	Carcinoma of stomach, with metastases to thoracic extradural space	Decompression laminectomy. Bilateral rhizotomy	Carcinomatosis	No
512469	62	Brain tumor	Temporo-parietal craniotomy	Brain tumor	Yes
585325	24	Multiple brain abscesses	Craniotomy with evacuation of brain abscesses	Brain abscesses	Yes
587817	22	Brain tumor	Craniotomy with evacuation of tumor	Brain tumor	Yes

TABLE V.—*Continued*

OPERATIVE DEATHS, SURGICAL SPECIALTIES (PRIVATE)—*Continued*

UROLOGY: 8

Number	*Age*	*Primary Diagnosis*	*Operation*	*Cause of Death*	*Autopsy*
563784	46	Carcinoma of bladder	Cystectomy. Prostatectomy. Pelvic lymph node dissection and bilateral ureterosigmoidostomy. Bilateral ureterocutaneous anastomosis	Pelvic abscess due to postoperative urinary extravasation	Yes
568186	67	Retroperitoneal lymphosarcoma. Hypertensive cardiovascular disease. Diabetes mellitus	Exploratory laparotomy. Secondary closure of abdominal dehiscence	Bronchopneumonia	Yes
569020	59	Carcinoma of bladder. Hypertensive cardiovascular disease. Peritonitis	Transurethral biopsy of bladder tumor. Radical cystectomy, lymph node dissection, prostatectomy, seminal vesiculectomy, bilateral ureteral cutaneous anastomosis, and permanent sigmoidostomy	Peritonitis	No
554588	56	Carcinoma of bladder with metastases and local extension. Large bowel obstruction	Sigmoid colostomy. Subthecal injection of alcohol for pain	Carcinomatosis	No
554082	81	Carcinoma of kidney with metastases to liver. Hypertensive cardiovascular disease	Exploration of kidney	Lower nephron nephrosis	Yes
574020	72	Carcinoma of bladder. Duodenal ulcer	Total cystectomy with bilateral uretero-sigmoidostomy	Hemorrhage from duodenal ulcer	No
575121	69	Carcinoma of prostate	Transurethral resection of prostate and bilateral orchiectomy	Pulmonary occlusion	No
578571	75	Benign prostatic hypertrophy	Suprapubic prostatectomy	Coronary occlusion	Yes
ORTHOPEDIC: 1					
578372	88	Fracture of neck of femur	Hip nailing	Cerebral vascular accident	No

TABLE VI.

NONOPERATIVE DEATHS (PRIVATE)

General Surgery: 15

Number	*Age*	*Primary Diagnosis*	*Cause of Death*	*Autopsy*
491701	42	Terminal carcinoma with metastases to brain	Carcinomatosis	No
561526	58	Carcinoma of lung with metastases to chest wall	Carcinomatosis	No
443383	62	Amebic dysentery. Aortic stenosis and insufficiency. Hypertensive cardiovascular heart disease	Amebic dysentery	No
432968	46	Carcinoma of breast	Carcinomatosis	Yes
568704	69	Carcinoma of esophagus. Generalized arteriosclerosis	Bronchopneumonia	No
37503	50	Hypertensive cardiovascular disease. Cerebro-vascular accident	Cerebro-vascular accident	No
571124	80	Burns, second and third degree, right arm. Arteriosclerotic heart disease. Possible mesenteric thrombosis	Hypostatic pneumonia	No
574014	68	Carcinoma of breast. Arteriosclerotic heart disease with cardiac failure	Carcinomatosis	Yes
343943	54	Postmenopausal bleeding. Bandi's disease. Chronic glomerula nephritis. Sigmoid obstruction. Chronic cholecystitis and cholelithiasis	Intestinal obstruction	No
524965	73	Postoperative perineal colostomy for carcinoma of rectum. Chronic hepatitis	Chronic hepatitis	Yes
579091	50	Perforated duodenal ulcer. Generalized peritonitis	Generalized peritonitis	Yes
541794	63	Metastatic carcinoma from sigmoid	Carcinomatosis	No
575433	61	Generalized peritonitis. Postoperative abdomino-perineal resection. Carcinoma of rectum	Peritonitis	Yes
582131	57	Carcinoma of sigmoid	Carcinomatosis	Yes
262647	74	Carcinoma of duodenum	Carcinomatosis. Peritonitis	Yes

TABLE VI.—*Continued*

NONOPERATIVE DEATHS (PRIVATE)—*Continued*

UROLOGY: 9

Number	*Age*	*Primary Diagnosis*	*Cause of Death*	*Autopsy*
560098	43	Recurrent carcinoma of kidney	Pulmonary embolism	No
51202	55	Chronic uremia. Pyelonephritis, chronic. Surgical absence of right kidney	Uremia	No
48934	52	Extensive carcinoma of bladder with metastases, both localized and general	Carcinomatosis	Yes
502822	60	Hypertensive cardiovascular disease	Uremia	Yes
568433	67	Carcinoma of bladder with metastases	Carcinomatosis	Medical examiner
572832	71	Benign prostatic hypertrophy. Acute prostatitis. Varicosities left leg. Generalized arteriosclerosis	Massive pulmonary embolism secondary to thrombophlebitis	No
207450	65	Bilateral hydronephrosis. Staghorn calculus. Carcinoma of bladder. Uremia	Uremia	Yes
563770	67	Leiomyosarcoma of the urinary bladder	Leiomyosarcoma of the urinary bladder	Yes
585565	56	Carcinoma of cervix	Hemorrhage from the perineum	Yes
ORTHOPEDIC: 2				
584867	59	Bronchogenic carcinoma of lung with metastases to shoulder and thigh. Pathological subtrochanteric fracture of femur	Coronary occlusion	No
582794	70	Fracture of neck of femur. Abdominal aortic aneurysm	Ruptured abdominal aneurysm	Medical examiner

TOTAL DEATHS (PRIVATE): Operative	55	Autopsies obtained	41—52.6% of Deaths (Private)
Nonoperative	26	Medical examiner cases	3
		No autopsy	37
	—		—
	81		81